MODERN BUSINESS

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OF THE

MODERN BUSINESS SERIES

Office Administration

By

Geoffrey S. Childs

Vice-President and General Manager,
Pitcairn Aviation Company, Inc.

In collaboration with

William B. Cornell

Professor of Management, New York University

Alexander Hamilton Institute
New York

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PREFACE

In the field of productive effort much has been gained of late years thru the analysis of accepted processes. Factories and machine shops have, as it were, been strewn with question marks, and investigators with keen eyes and active brains have taken to pieces and resolved into their several parts well established methods and processes. In fact it has seemed at times that the longer a process or operation had been established, the greater the ground for questioning it.

War has been declared on routine, at least the old routine. Out of this keen analysis of processes has grown modern factory management intent upon new things whenever they promised a gain in efficiency. Out of the old traditional routine built upon haphazard and custom, there is growing a new routine based on rational analysis and scientific planning.

This spirit of the times is more and more finding expression in the conduct of offices as well as factories. The office manager is a relatively new functionary. Unconsciously perhaps he is bringing to bear upon the problems of this work those principles which lie at the root of factory management, adapting them as he proceeds to the special conditions with which he has to deal.

Because he has been concerned with one question of detail after another, the office manager and the executive over him have been unconscious of the fact that there was behind these several problems, in embryo, at least, a science of office management. It is the purpose of the present Text to look upon the office problems as a whole, and sketch the outlines of this rapidly developing branch of organized business information.

The plan of the book and the distribution of the subject-matter was worked out in consultation with a Committee of the Officers of the Institute. Mr. Bernard Lichtenberg, formerly Office Manager of the Institute and now Assistant Director of Advertising, collaborated in the preparation of several chapters. In readjusting the relation of the present Text with that on Plant Management, Professor Dexter S. Kimball, Dean of the College of Engineering of Cornell University, permitted the use of much of his material on labor questions contained in his former volume, and Mr. Jamieson Marshall gave assistance in the adaptation of the material for use in the present volume. To all of them grateful acknowledgment is here made for their valuable assistance.

The author desires to express his obligation to Professor W. B. Cornell for helpful collaboration.

GEOFFREY S. CHILDS.

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OFFICE ADMINISTRATION

CHAPTER I

THE OFFICE IN MODERN BUSINESS

1. *Development of the modern office.*—The modern office was made possible only by the introduction of modern office appliances, and these have been developed within comparatively recent years. Many persons had tried and had only partially succeeded in producing a mechanically perfect typewriter when the first machine was placed on the market in 1874. This indispensable tool of modern business is only fifty years old. Most of the appliances whose use has followed are still younger. It is difficult for us to picture a time when business records were written wholly by hand and when the only means of duplication available was the old-fashioned letter copy-press; when incoming letters were filed away in boxes and paid bills were strung upon a wire like a catch of fish and hung upon a nail. Yet those times are not very far behind us.

Visit a shoe factory in Lynn or Brockton, watch the innumerable processes carried on by countless machines to put a shoe on the market, and then conjure up in memory the old-time shoemaker of not so

long ago who made shoes in a little shack with a few knives and awls. There you have a contrast no less striking than that which exists between the offices of some of our larger undertakings today and the offices in which our grandfathers began their business careers.

The output of the village shoemaker was shoes, as is that of the great modern factory. Yet only in this are they alike; in their technical, their economic and their administrative problems, they are vastly different. The output of the modern office is clerical work as was that of the old-time office. Not only have mechanical processes changed, however, but with the changes have come new principles, new methods and new ideals in office management.

It is an interesting speculation how, with the lack of appliances and facilities which characterized the offices of fifty years ago, they would have handled the work of today. There was, however, at that time no occasion for such a volume of office work since business in all branches, manufacturing and mercantile, was conducted on a relatively small scale. Big businesses as we know them today did not exist. Few had passed beyond the stage where the competent manager, whose office, in the familiar phrase was under his hat, could not handle in a thoroly satisfactory manner the business which came up. That we have grown beyond that stage of one-man management needs no demonstration.

Notwithstanding the great change from the old to

the new, the development of the modern office has not paralleled the development of the modern factory from the standpoint of efficient and economic operation. It would startle many employers if they realized the amount of money that is wasted in the office end of their business.

2. *Office workers.*—The time has passed when office management could be confined to a consideration of appliances and processes. The human element is just as vital a factor in successful office administration as it is in successful factory management. Whatever progress may have been made in devising machines to do some of the office work, such machines are far from automatic. There are industries in which mechanical forces ingeniously directed do practically all the labor that is performed, requiring only a small number of persons to tend the machines. But such a consummation, whether to be desired or not, has not been attained in office work, nor is it likely to be.

The selection of proper persons for the work, the necessary supervision and suitable training, the giving of compensation in such manner as to stimulate the best efforts of the workers, and such attention to their welfare as is an appropriate part of business policy are among the problems the modern office presents for solution.

3. *Appliances.*—Appliances add to complexity, and complexity adds to appliances. They go hand in hand. The complexity which comes from appliances

is seeming only; it is the aspect in which these "new-fangled notions" are viewed by those who have been brought up in the old ways. In reality their functions are to add simplicity, directness and efficiency to the office work. If they do not do this—and there are, of course, many inventions which, however ingenious, fail to meet this test—they are unsuccessful and find their way into the junk heap.

The complexity which necessitated business appliances is the outgrowth of the same myriad forces that have brought about larger business units. It is a common observation that the more frequently operations are repeated, the more attention is given them, and the more thought is expended in examining into the processes and seeking means to improve them. The village storekeeper who writes an occasional letter puts the stamp on, for example, in the natural instinctive way. But give an office boy a hundred letters to stamp, his taste for mucilage will soon pall and he will seek some other method of moistening the stamp. Let the number of outgoing letters mount up into the thousands and a mailing machine, even tho its first cost may be considerable, will save not only time but money.

4. *Practices.*—It is a frequent rule that practice precedes theory, that the latter is as it were distilled from the consideration of what men habitually do. As to the greatness of the changes which have taken place in business offices in the last generation there

can be no doubt. They have been introduced successively, each on its own merits. Thus gradually the entire office routine is changed. The men in charge know why they make the changes. Those who succeed them accept the new methods as standard procedure. It is only when such a change is under consideration that men realize the presence of a principle. They do not call it a principle, since they think in terms of time saving, labor saving, larger output, efficiency, and the like. But each of these in reality involves a principle of management. Thus, back of every change, of every innovation, there is a particular principle at work.

5. *Principles.*—Men practised division of labor before they were aware of it as a principle. But when they recognized it as a principle they took a great step forward since it then passed from the realm of haphazard procedure to that of plan and purpose. The orderly combination of the principles underlying economic activity resulted in the science of political economy or economics as it is today more frequently called.

In the same way the patient analysis of office organization, procedure and methods yields us a body of principles which when combined in a systematic arrangement gives the beginnings of a real science of office management. It is the purpose of the present Text to unfold those principles and develop that science.

6. *Science.*—There are always some who dispute the application of the word science to a new subject. Discussion as to what constitutes science and as to whether a certain body of knowledge deserves that title may be interesting exercises in dialectics, which do not go far toward advancing the sum of human knowledge or power.

For present purposes it is sufficient to characterize science in the sense here used, as a body of organized knowledge. It is clearly recognized that the various bodies of knowledge are in different stages of advancement. Some are in the formative stage, just emerging from a state of disorganization.

Obviously, the science of office management is in such a formative state. While it is in this condition, it will not have universal recognition. But just because it has not yet earned such recognition, the problem of presenting this knowledge in systematic form becomes of greater interest. Certainly the value of having a grasp of the fundamental principles underlying successful office administration is increased enormously by the fact that they are not generally realized.

7. *Principles are general.*—The practice from which the principles set forth in the Text are drawn is, it will soon be observed by the attentive reader, that of the larger offices. The obvious reason for this is that in the larger offices the need for standardizing practice is felt earlier than in the smaller ones, and principles rather than rules of thumb are more

earnestly sought. Reform often begins with those most advanced and works its way downward, whether in social, political or economic life. It has been because colleges and universities have recognized the problems of education that most of the changes in elementary instruction have been introduced.

But it will be recognized at once that if the conclusions drawn from the practice of the larger offices are in reality principles of office management they must apply to all offices, large and small. American business men are constantly building for the future, and there are few of them whose ideal of achievement is to remain small. This or that type of appliance may be too costly to instal in a small office, but some day it may become necessary, and in the meantime the principle which makes it desirable in a larger office may be put to work in some other form.

After all, the basic aim of the office is, as in every other department of business, the maximum output of effective work at the minimum cost. Given this aim, principles of efficiency are always to be followed, even tho the magnitude of operations at any given time does not permit the attainment of the highest possible results.

REVIEW

What conditions have given rise to the many new and improved office appliances?

Do these appliances tend to take the place of persons in an office?

Why was it possible for the offices of fifty years ago to con-

duct their business without the appliances now considered absolutely essential?

What is meant by the "science of office management?"

Are the same principles of office management applicable to both large and small offices?

NOTE: The review questions thruout this Volume are for the personal convenience of the reader in testing his understanding of the Chapter. It is not necessary or desirable for subscribers to submit written answers to the Institute except in a case where they may feel uncertain as to their grasp of the question under consideration.

CHAPTER II

LAYOUT OF THE OFFICE

1. *Purpose of layout.*—It is a rare occurrence when an organization has the opportunity of acquiring precisely the sort of office which it would choose. Most offices are in buildings constructed not to suit the demands of a particular business, but those of business in general.

If the office has been properly located and enough space obtained for all present requirements and probable future needs, the next step is to place the employes and the equipment in such a manner that the maximum of productive work is obtained with a minimum of human labor. In the case of offices which must attract and hold customers, such as banks and brokerage offices, a further object must be kept in view, namely, that of serving the pleasure and convenience of the customers.

2. *Location of office.*—The best location for an office must be determined by the special needs of that office. Sometimes the location is determined by the convenience of customers; sometimes by the nearness of related trades or of passenger and freight stations, or the post office. For instance, the mail-order house, other things being equal, should be near the post

office. Banks, insurance companies and brokers are usually found grouped together in the financial district where they can conveniently do business with one another.

3. *Size of office.*—The office should not only be large enough to accommodate the departments which it is to hold at present, but it should also be located where there is space available for future growth. In establishing an office, one should consider the office space that has been needed during, say the previous five years, and the rate of growth for that period. From these facts one can determine the amount of space that will probably be needed during the next five years. Office arrangements should be so made that there will be no need to move except for unforeseen reasons. There is an old saying, "Three removals are as bad as one fire." In every move of an office, there is a large sacrifice of equipment, made obsolete by new conditions, and of fixtures and improvements that must be left behind in the old location. Moreover when the loss of the established telephone number is involved it tends to put the concern out of touch with both buyers and sellers.

4. *Providing for mechanical and electrical equipment.*—There will be economy in the end if, at the outset, provision is made for certain types of mechanical equipment in the office. If the office is to occupy more than one floor, elevators, dumb-waiters, pneumatic tubes and chutes may be used for carrying parcels, records and messages. Overhead carriers are

sometimes used for such communications between departments on the same floor. Inter-departmental and outside telephone systems require extensive wiring. At least the main lines of the wiring can be laid at the beginning of the office planning. So also with the wiring required for lighting and for operating the numerous electric office appliances that are used today.

When the home office of the Equitable Life Assurance Society was laid out, search was made for a system that would avoid the unsightly exposed wiring common in many offices. Finally, a conduit system was provided for wires, with ample allowance for expansion and changing conditions. The principle is the same as that which is inducing many cities, in planning their streets, to put all sub-surface piping and wiring in a single conduit, so that additions, changes, connections, and repairs can be made without tearing up the highways.

A large export firm in this country which built a marble home for itself found too late that no provision had been made for wiring. It had the alternative of putting up with exposed wiring or drilling thru the marble. It chose the latter, at great expense.

5. *Room plan of the office.*—How shall the office be laid out? The habit of providing a private office for every official is gradually passing. There are offices today where everybody, from the president down, is located in one great room. The higher of-

ficials are usually separated from the rest of the office by railings, or wood and glass partitions, in some cases extending only part way to the ceiling. Under such a plan every one in the general office is under constant supervision of his superiors and his associates. This helps to prevent waste of time and makes it easier to detect any lost motion in the passing of business thru the organization. Moreover, an arrangement of this sort fosters a democratic feeling or esprit de corps.

On the other hand, executives who must think, plan, analyze reports, and so forth, find it difficult to do so in the noise and interruptions unavoidable in an open office. There are employes in every business whose work is such that it can best be done only in quiet and privacy. An editorial writer, for example, can not do his best work amid such distractions. There are certain kinds of work and certain occasions in every business which require private rooms.

In a large office composed of many departments there are decided advantages in giving each department a separate room. Departmental control is thus simplified and it is possible to lay out and arrange each room for the convenience of the one department.

6. *Partitions.*—Private rooms can be secured by means either of solid walls, or of solid wood or wood and glass partitions. The advantage of partitions is that they may be shifted to suit any change in the office needs. The use of transparent glass does away

with the objections against wooden partitions that they shut out light and reduce the opportunities for supervision. Translucent glass partitions may be used when privacy is wanted.

7. *Aisles.*—Care should be taken to provide aisles that will be adequate for the traffic without wasting space. It must be borne in mind that an aisle, especially a long one, should be no wider than is needed; otherwise, much valuable space will be sacrificed.

Sufficient aisle space should be allowed behind chairs to permit employes to pass others seated at their desks without disturbing them.

8. *Letting the work flow.*—In determining the layout of desks, filing cases and other equipment, one rule must be kept in mind. The work should be allowed to flow thru the office, as far as possible, without criss-crossing. A great many offices are arranged with the handling of an order in mind. In this case, the office should be so laid out that the mailing department which opens the order is adjacent to the credit department which decides whether the order shall be accepted. Next to the credit department should be the sales department, which acknowledges the order, then the order clerks who record it and make the duplicates which go to the accounting and shipping departments. This illustrates the principle to be followed. The precise layout in any office can be determined only by a study of the work to be done.

9. *Testing the layout.*—To determine the efficiency

of any layout, take the floor plan, indicate on it the arrangement of desks and other equipment; then draw a dotted line showing the course of the work with which the office force is occupied. If it is found that the dotted line doubles back, crosses and recrosses, it is probable that the layout can be bettered. To test this have small pieces of cardboard cut to represent the furniture pieces of the office and shift these about until a satisfactory arrangement is obtained. If time can be saved in the passage of an order thru the office, or if waste motion can be eliminated in the relations of one department with another, it may pay to go to the trouble and expense of removing partitions and making a complete rearrangement. With proper planning, changes of this kind can be made overnight, or be made gradually so that only one department is inconvenienced at a time.

10. *Equipment and users.*—If we follow this principle of letting the work flow in a "straight" line, we shall put adjacent to each other those departments which have the most contact. We shall see that equipment is placed nearest to those who are actually using it. In one instance considerable time was saved by taking the files of salesmen's correspondence out of the general file room and locating them in the sales department on another floor. It had been noted that this correspondence was used only by the sales manager and his assistants, and there had been a great amount of lost motion in carrying the folders to and

from the general files. Nearly every concern is likely to find similar wastes in its own offices.

It is worth while to re-examine the office layout from time to time to see if it is suited to prevailing conditions.

11. *The principle of compactness.*—In the distribution of desks and other equipment, the principle of compactness must first be considered. Office space is valuable, especially in the larger cities. The practice of arranging cardboard slips representing equipment upon the office plan will often suggest means for more economical use of the space. By one firm it was found possible to put five office desks in the space which had formerly accommodated but four, thru the simple device of placing them obliquely to the aisle instead of facing it. Another concern doubled the capacity of its filing room by running its file drawers eight high instead of four high. A runway ladder was used to make the drawers easily accessible.

12. *The principle of roominess.*—Yet the economy of space can be carried so far that it may hinder efficient work. In general, it may be true that the most efficient employes are those who are "glued to their desks." But this is not to be taken too literally. Sometimes they must move and when they do so they should not disturb others. A few general hints can be given, based upon experience, with regard to the space that should be allowed for workers.

Each employe, including his desk, chair space and aisle, requires approximately fifty square feet of working space. Aisles should be at least three feet wide. When employes work back to back, it is well to leave four feet between chairs. In front of a filing cabinet a space of five feet should be allowed, so that a person can pass even when a drawer is fully extended. The idea of compactness is to be pursued only up to the point where it is short of overcrowding.

13. *Appearance.*—The office should be so laid out that it will present a pleasing appearance. A well-arranged, inviting office is a factor in stimulating employes to their best efforts. There is no question but that it is difficult to convince the average visitor that a cheerless, disorderly office houses an organization of the highest caliber.

14. *Ventilation.*—The plan of ventilation should provide sufficient fresh air for office workers. Otherwise, they tend to become languid, especially toward the close of the day. The subject of ventilation is a technical one that need be considered here only briefly. Methods of renewing the air are numerous. There are window ventilators that deflect the cold air upward. There are inexpensive exhaust fans that draw out the stagnant air while fresh air finds its way in at the doors and windows. There are ventilating systems that pump in air from the outside, pass it over steam coils and send it into the room at a required temperature. The requirements for ventilation will vary with the circumstances in each

office. Before making a choice, therefore, an expert should be consulted. Whatever ventilation system is used, it may well be assisted by the practice of opening windows before work begins in the morning, and during the noon hour.

Makeshift ventilation carries the danger of drafts. Currents of air of a temperature lower than 60 degrees should not be permitted to strike the worker's body. Colds can arise from too much ventilation in summer as well as in winter, as those can testify who have suffered from the injudicious use of electric fans. An employer owes it to his people to provide working conditions that are conducive to their well being. Incidentally, such a policy is not out of harmony with the "practical business viewpoint." An eastern mercantile concern has figured that every cold in the office costs the company $24, directly or indirectly.

15. *Office temperature.*—Overheating the rooms is unsanitary and, what is equally important from the viewpoint of office efficiency, it is a hindrance to good work. The New York State Commission on Ventilation and the Chicago Commission on Ventilation have established, with scientific accuracy, that 68 degrees Fahrenheit is the temperature at which the best office work is done. In a test it was found that a group of men did 37 per cent better work on a certain job when the temperature was at 68 degrees than they did under the same conditions at 86 degrees. A larger output was attained at 68 degrees by typ-

ists and also by those who did mental multiplication. With abundant fresh air, the workers in a temperature of 68 degrees did over 10 per cent more work than those in a temperature of 75 degrees. It is therefore apparent that a temperature of over 68 degrees tends to cause inefficiency and that the inefficiency increases still further when the higher temperature is accompanied by a lack of fresh air. There is obviously the same reason for preventing the office from becoming too hot in the summer that there is in the winter. Electric fans and various ventilating systems serve this purpose.

16. *Noise prevention.*—Every one realizes the difficulty of doing concentrated work in a noisy office. Not alone the $25,000-a-year executive but also the $15-a-week clerk will do better work if he can be protected from such distraction.

In large cities, avoidance of outside noise is secured by the use of offices high above the street level. The street or neighborhood noise is also reduced when the use of artificial ventilation makes it unnecessary to open windows. Window strips on closed windows are also helpful.

Noise within the office can be reduced thru supervision and reminder. Unnecessary moving about the office can be forbidden. Noise-producing machines and methods can be isolated in a closed-off part of the office. Considerable success in the reduction of noise has been achieved by padding the walls and ceiling with material of sound-absorbing texture.

Rubber rests can be put under typewriters and the floor covered with sound-deadening material. There are, in fact, noiseless typewriters. Every reduction of mechanical noises makes conversation between clerks more evident and thus tends to reduce it.

17. *Lighting systems.*—Few offices today are lighted by gas. Where such is the case, an incandescent burner should always be used. Most offices are lighted by electricity. There are three methods by which artificial light is made available for the workers: direct, indirect, and semi-indirect. With the direct method we are all familiar. Semi-indirect lighting, which is the system where the light is partially reflected from the ceiling, requires from forty to fifty per cent more current than direct lighting, while indirect lighting, which is the system where the light is entirely reflected from the ceiling, requires from fifty to seventy-five per cent more. This is the price to be paid for more pleasant and efficient conditions of work.

Semi-indirect lighting has been adopted more rapidly than indirect. People in general apparently do not feel that they are getting sufficient light, if they do not see the source of it. When an employe has such a feeling, it may generate uneasiness and unrest that will prevent his giving full attention to his work.

18. *Care of lights.*—No matter what method of lighting is employed, a few general suggestions are worth keeping in mind. Reflectors and lamps should

be regularly cleaned. It may make a difference of over 25 per cent in the amount of light. So far as possible all cord connections for fixtures, fans and desk lights should be removed and supplanted by floor, base or wall outlets. A cobweb of hanging wires is not only unsightly, but invites the danger of fire thru short circuiting. Lamps should be turned off promptly when not required, and only as many lights should be used in the daytime as are necessary. Each department should be notified to that effect and regular inspection made to see that these instructions are carried out.

19. *Drinking water.*—An adequate supply of good drinking water in the office is as important as a supply of fresh air because most people drink water at least five times during the day. Where the city drinking water is not wholesome, bottled water should be provided. It is best in all cases to supply individual glasses or paper cups unless sanitary drinking fountains are used. If drinking places are conveniently located among the working force there will be no occasion for any employe to walk a long distance to get a drink. Providing enough places also prevents the loss of time that occurs when the drinking facilities are so inadequate that there is crowding around them, for the crowding leads employes to waste time in conversation.

Some concerns have found it profitable to instal water-cooling systems with sanitary drinking fountains.

20. *Toilet facilities.*—The laws of many states specify the minimum supply of toilet facilities. For example, they may require that there must be one wash bowl and one toilet seat to every twenty employes. This will ordinarily be found insufficient by those who wish to prevent overcrowding and waste of time. Adequate and decent toilet rooms, kept clean and neat, contribute much to the contentment and morale of the working force.

REVIEW

What are some of the points to be kept in mind in laying out an office?

Compare the advantages and disadvantages of one large office room for officials and employes with the plan of private offices.

Determine, by some simple device, the efficiency of the layout of any office with which you are familiar.

Show how improved work will result from giving careful attention to details of light, heat, noise, etc.

CHAPTER III

ORGANIZATION AND CONTROL

1. *The meaning of organization.*—Just what are the elements which enter into the office organization? The answer is made clear by recalling the definition of an organization as an artificial organism. An organism is a living thing, its parts so differentiated and coordinated that together they perform the functions of life. The human body, for example, is such an organism. In it nature has differentiated the members, so that each of them does only one type of work. No one, for example, is tempted to walk habitually on his hands, or use tools with his feet. The members of an office force are a set of human beings, each very much like the other. Age, sex, ability or previous training has differentiated them; some are bookkeepers, some stenographers, some office boys, and so forth; but the process of differentiation is not natural. It is planned and carried out in the office itself and nowhere more notably than in the higher, supervisory positions.

In creating an organization, we seek to construct an artificial organism in which we specialize functions and assign members to perform them. In a good organization, each individual has assigned to him

specific work and is instructed as to the time, the order and the manner in which he shall do it. So far as the business is concerned, the member surrenders control over his own actions. Control is assumed and exercised by the management which determines the policies, standards and methods which he shall follow. The management is the brain which the member must obey.

From this it might appear that membership in an organization involves loss of individuality, that it means resignation to becoming a mere cog in a machine. On the contrary, the lowliest member of a great organization can hope to become its head, and this for the important reason that the differentiation of tasks or functions is not a permanent one. There is a constant shifting, a constant promotion of those who show ability.

Ability is shown in two ways. In the first place, the thinking can never be done completely for the members of an organization as the brain does it for the members of an organism. The organization members must be and consequently are left some measure of decision and initiative. In the second place, the very act of submitting to the policies, rules and methods of the organization is evidence of the loyalty which is a test of fitness for a higher position.

2. *The development of organization.*—Organization is designed to get the maximum of performance out of a set of human beings associated for a common end. It is natural that organization should first have

been developed in the military field inasmuch as war long antedated commerce. Nations that did not develop efficient military organization did not long survive.

Every one knows that military organization demands for its primary requisites the careful delimitation of authority, the maintenance of discipline, the obedience to orders, the perfection of training in every officer and subordinate. Time has shown that it is advisable to have separate sets of officers for the two functions of planning and of executing military operations. The actual leaders in the field are now known as line officers; the new group, as staff officers. The distinction is all the more important in that the requirements of character are different for the two functions. Ability to lead and inspire men in action is largely a matter of personal courage and magnetism, while the quality required in the planner is an analytical mind, often cold and lacking in contagious enthusiasm. Staff officers have charge of planning and of operations, not of many men; the work of line officers consists almost entirely of handling men.

Military science is the source of effective business organization. The development of the office itself was long preceded by scientific organization in railroading and manufacturing. It was the railroad and the factory that first evolved larger units which required organizing in order to become efficient. The large office is a matter of only recent growth.

3. *Forms of organization.*—There are three gen-

eral forms of office organization: (a) the centralized office; (b) the departmental office; and (c) a combination of these two.

The main difference between the centralized and the departmental organization is found in the supervision over and control of clerical employes. In centralized organization, we find the general office with all its branches serving simultaneously the production division, the financial division, and the selling division. None of these divisions have any filing clerks, stenographers, office boys, mail handlers, etc., of their own. The demands of each division for all phases of office help are pooled in the general office.

In a departmentalized organization of the office force each division has its own stenographers, office boys, file clerks, etc.

Under the third or combination plan some of the functions are centralized and some are departmentalized, depending upon the best interests of the business.

4. *Advantages and disadvantages.*—The main advantage of a centralized office is that it prevents unnecessary duplication of work, equipment and appliances. A considerable saving of the number of office employes is usually made possible by their concentration in one office. If each department has its own office force, this force must be large enough to carry the "peak load" of the department's business, which may come during two or three days of the month. On the other hand, if the office employes

of all divisions are gathered together under one jurisdiction the periods of "peak loads" can be used to offset and to supplant each other. Clerks can be shifted to points where the pressure of work demands it. Supervision and inspection under the centralized plan can be made more efficient as well as economical. The main objection to the centralized office is that with the growth of an organization it is difficult to adapt centralized clerical departments to the special needs and methods of a given department. In other words, the bigger the force, the greater the chance for delay.

Departmental organization has the advantage of adapting the clerical worker to the particular need of each department. There is also opportunity for instituting competition between various office groups and there is ordinarily a saving of time in getting work out as compared with the general office method.

As a matter of fact, it will in most cases be found that the solution of the problem as to whether an office should be centralized or decentralized will be to adopt a combination plan. On the whole the advantages of the centralization of clerical employes tend to outweigh the disadvantages. When the disadvantages of centralizing any given work or personnel outweigh the advantages, then this particular work or personnel should not be centralized. For example, the selling division of an organization may have an extensive daily correspondence with salesmen on the road and with branch managers. Such a de-

partment may well have its own stenographic force and keep its own files since its files will be used very little by other branches of the business.

5. *Need of control.*—Economists tell us that the strongest motive in man is the so-called economic motive. It is the motive which impels men to get the maximum of return from the minimum of effort. In this principle lies the need for adequate control.

Employes who could not be induced to steal money are often grave offenders in stealing time. Unless there are proper methods of control, production will be seriously curtailed thru actual "soldiering," daydreaming under the semblance of work, extensive morning greetings, visiting among employes during working hours, personal and telephone conversations, handling personal correspondence, tardiness, unjustified absences, taking office time for putting on and taking off wraps, and clock-watching.

The manager must get from his subordinates the equivalent of a day's pay, not only to increase his profits but even to stay in business. Less than this contribution from each employe means that the cost per unit of production is increased, and the firm whose costs are thus increased is in danger of being eliminated from the field of competition. Even if the situation does not result as disastrously as this, inadequate control is a serious matter because it weakens the esprit de corps and creates dissatisfaction in the force.

The methods of stimulation described in Chapter

XVII will prove successful only when the fundamental principles of control are already in operation. Bonus systems, rewards, contests, etc., are designed to induce the employe to render the maximum output after the minimum has been secured. Adequate control, is therefore, an essential to successful management.

6. *Principles of effective control.*—There are many methods of securing effective control, but as all of them are based upon a few definite principles, one must know the principles before determining upon what methods to use in his particular organization.

In the first place, it is necessary that employes should know that the person who exercises control has authority to do so. Furthermore, they should clearly understand what is expected of them in the application of this control. Any lack of clearness in the distribution of responsibility is sure to weaken control.

Adequate supervision is also fundamental to effective control. Unless employes know that they are under some one's scrutiny and that this supervision is an active one, there is less incentive to give the equivalent of a day's pay.

Effective control involves frequent inspection of the work being done. It is only by inspection that carelessness and the natural tendency to fall away from high standards can be overcome.

Finally, effective control can be exercised only when the manager really knows what is going on, and

does not merely guess at it. In a small office this does not present a serious problem, but in a large office methods that are more or less elaborate must be devised for giving the management a knowledge of all facts. When those in charge are not familiar with the facts in connection with any activity, employes are quick to realize it and take advantage of it.

7. *The manager.*—It is chiefly by his own acts that a man inspires and must inspire in his subordinates the feeling that he is a superior to whom they owe obedience. To this end he needs certain qualities of temperament, such as patience and self-control, certain qualities of mind such as persistency, self-reliance and a sense of justice; and certain habits of conduct, which include dignity and reserve of bearing. It is desirable for a man in charge of other men to keep his own counsel in order that his doings and deliberations are not unnecessarily exposed to their view. He needs their views and suggestions, yet these can be obtained without giving the impression that he is in any sense dependent upon them. They should rather be made to feel that they are privileged to share in the counsel and confidence of their superior.

There should be reserve in the promises of a manager toward his subordinates, particularly upon his assuming a new position. It is easy to make sweeping promises to right everything and settle all difficulties. Such promises usually can not be redeemed. It is better to promise less and deliver more. In politics promise without fulfilment is not infrequent and

it persists because the voters do not afterward check up very carefully the performance of the office-holder. This is not so with the business manager and his men. Big promises and small deeds on the executive's part breed discontent, disrespect and insubordination among his employes.

8. *Keeping free from detail.*—The office executive must not permit himself to be swamped with the details of office work. He must delegate authority and responsibility to subordinates, requiring of them results and judging the quality of those results by means of supervision, records and reports.

In Ray Morris' "Railroad Administration" is an excerpt from the private documents of Charles E. Perkins, for many years president of the Chicago, Burlington and Quincy Railroad, in which the necessity for an executive's keeping away from unnecessary detail is ably emphasized. Mr. Perkins' message has a meaning not only for railroad presidents but all executives:

> Never do, or undertake to do, yourself, what can be done sufficiently well by a subordinate. There are things enough which can not be done sufficiently well by subordinates to occupy your time.
>
> Trust those under you, and let each one work out his problem, for the most part, himself; otherwise your subordinates will not learn to depend upon themselves, but upon you.
>
> Keep as much as possible out of petty, everyday details. Let needed reports be made to your adjutants, if you choose, but do not take it upon yourself to see them all. So long as the machine works smoothly, you should be a looker-on,

except as to those particular parts of it which, because others can not do them well enough, you yourself may undertake to attend to. It is a mistake to assume that others are less able, or less attentive, than we are.

Never allow the gossip of the camp to reach you. It is inevitable, but the less you hear of it the better fitted you are to conduct the matters of importance.

Require the minutest accuracy in money matters; to which end the auditor of accounts should call attention to every departure, no matter how small, or seemingly unimportant, from well-established regulations and usages.

Always regard the feelings and prerogatives of those above and below you. Do to others as you would wish to be done by under other circumstances.

9. *Distributing subordinate tasks.*—In the distribution to subordinates of tasks of constantly increasing importance, special care must be taken neither to underburden nor overburden them with work or responsibility. The former will result in a loss in economy, the second, a loss in efficiency. Within the sphere of duty and responsibility marked off for each department, there must be a liberal area of opportunity for the exercise of initiative and discretion.

Strange as it may seem, one of the hardest problems to be solved in building an organization is to get its members to assume responsibility. Most people seem content to work merely for the salary they get, not for the higher interests of the company they serve or for their own future. Many who are willing to give their time and such part of their efforts as is necessary to the discharge of their duties in a reasonably satisfactory manner regard their business

connection as a necessary evil forced upon them by the fact that they must have the wherewithal for the necessaries of life. Office executives are always on the lookout for employes who will assume and discharge responsibility, and in this field, as elsewhere, there is promotion for those who will "make their employer's interests their own."

No person burdened with authority should be indispensable to the organization. For every such person there should be an understudy, capable of doing the regular official's work and available when his principal is, for any reason, absent. It sometimes turns out that the understudy can do the work better than his principal. The existence of such understudies is not without a certain wholesome effect upon those whom they are trained to succeed or it may be to supplant.

10. *Impersonal discipline.*—In the administration of discipline, the manager must be wholly impersonal. That is the only proper attitude, and it also serves to take the sting out of discipline, the sting which is felt as a personal visitation or persecution. Most men who have done wrong realize the fact and see the justice of being made to pay for it. It must always be kept in mind that the purpose of discipline is to prevent repetition of the offense, and to implant in the mind of the disciplined employe, and of others, the conviction that unpleasant results will inevitably follow if the company's rules are transgressed. Since the main purpose of punitive measures is to affect

future action it is sometimes preferable to warn and forgive rather than to discipline. But so long as human nature remains as it is, a major spur to efficiency is fear of discipline and discharge, and the manager who is unwilling to let his employes realize that these events are very real possibilities is lacking an essential quality of an administrator.

Some of the rules and regulations which the manager is called upon to enforce are laid down by the corporation officials above him. Some of them the manager himself promulgates. The manager who enforces them must regard them as being wholly impersonal. Therefore, there is no place for anger or impatience in dealing with subordinates, for anger is a personal affair. It is sometimes difficult to restrain a feeling and expression of indignation, but it is well to let that feeling cool off before taking action. It is always easier to maintain law and order when men regard the law as a friendly guide than when they look upon it as an expression of force.

11. *Personal supervision.*—Personal supervision by the office manager plays a very important part in effective control. While it is true that in an office of any size it is not possible or wise to rely upon personal supervision alone, at the same time it is an essential feature of control, no matter how large the office. Personal supervision enables the office manager not only to see that instructions are being carried out but also to inject into the work his spirit and his ideals. It enables him to overcome the tendency for

employes to work in a mechanical, uninterested way. By keeping in personal touch with his employes and the work they are doing he is in a better position to know what should be done to get satisfactory results.

12. *Delegation of supervision.*—In an organization of any size it is impossible for one man to supervise everything in person. Some part of the supervision must be delegated. A department head or chief clerk may be given jurisdiction over a group of employes doing the same type of work. He is, however, merely an aid to the office manager in extending control and should be directly responsible to the latter. He assumes, consequently, such functions as supplying employes with work, seeing that they do not waste time and that they observe the established rules and procedure of the office. In this way the office manager does not find it necessary to devote his energy to the details of supervision and at the same time does not loosen his control over them.

13. *Cooperation meetings.*—Regular meetings of the heads of clerical departments under the leadership of the office manager provide a means for discussing and settling inter-departmental problems.

At these meetings each department head may discuss frankly the problems that confront him in the management of his department. It may be some question of company policy with which he is not entirely in sympathy and on which he wants to voice his opinion. If his point is well taken, it is recorded

in the minutes of the meeting and steps taken to investigate it.

The meetings also give a department head an opportunity to bring forward constructive criticisms and suggestions regarding the routine in the jurisdiction of another department head, such as poor service, carelessness in handling work routed to his department, delays, etc.

Questions relating to problems of personnel, such as handling cases of tardiness, absence, carelessness, wrong attitude, etc., are brought up and the proper method to follow clearly outlined by their leader.

These meetings are not only valuable for the opportunity they give department heads to settle questions about which they may be in doubt, but also aid in building up a spirit of close cooperation among the department heads represented, since each is kept in touch with the problems of the others and when occasion arises can work in closer harmony with his associates.

14. *Personal inspection.*—No matter how much attention is given to departmental and individual reports the "master's eye" of the office manager can not be spared. There may be old-time managers who carry supervision too far, but they may still be held up as an example to those executives who are fond of sitting in their offices and pushing buttons, and those department heads who think that seclusion from employes means exclusion from details. Frank Gil-

breth has said: "The most vital feature of any work is the maintenance of right relations between the employe and the employer. The neglect of the human element will make of the result no more than a half success."

The essence of successful inspection is found in an element of surprise. Employes may properly know that their work is to be inspected; but the exact time should be unknown to them. The employe's attitude toward inspection changes when its purpose is found to be not merely to discover bad work, but also to discover good work, and when the result is praise for the good no less than censure for the bad. Even censure for bad work can be bestowed in such a way that it will appear as an aid toward improvement rather than as unqualified condemnation.

The practiced office manager does not go into great detail in his inspections. Often it is not known by employes that he is inspecting at all. If he knows the work of the department under him, he need only look for what are called "symptomatic details," infallible indices that show whether things are going well or badly with an employe, just as certain symptoms enable the physician to determine the presence of health or disease in a patient.

15. *Delegation of inspection.*—Just as it is necessary to delegate supervision, so it is necessary to delegate inspection in order that there may be a constant check on the quality of work being done. It is for this purpose that checkers are appointed to

go over all material where accuracy is essential. In an office employing several hundred people it will pay to have some one under the office manager devoting all his time to inspecting and keeping records on the quality of work being turned out by each employe. It must be understood that this delegation of inspection does not relieve the office manager of his responsibility for inspection since it is very easy for those to whom inspection is delegated to become careless.

16. *Organization chart.*—The organization chart is simply a record of the duties and authority of each man put into written form so as to leave no question as to rank and duties. It eliminates the chance that the employe will doubt the authority of the person exercising control and will frequently prevent petty disputes and irritations. Furthermore, it enables those in charge to clear up any misunderstanding in their own minds in the exercise of control.

The preparation of an organization chart is sometimes a difficult matter because of the fact that there is a good deal of interlocking of responsibility. But where this difficulty exists it is merely an indication of the need for studying and remedying the conditions that have resulted from the lack of definiteness.

In an organization where responsibility is clearly delimited, the preparation of an organization chart is a simple matter. It is an excellent thing to have such a chart prepared and hung in the manager's office where he has it constantly before him and where

those who confer with him can see it. It is even better to have the chart published and brought to the attention of every employe as this will remove the chance for any possible misunderstanding.

17. *Standard instructions.*—Trouble often arises because employes misunderstand what they are expected to do. It is well to realize at the outset that while a point may be entirely clear in the minds of those who are exercising control it may be quite otherwise in the minds of those who are being controlled. Hence every opportunity for misunderstanding should be eliminated. Employes should have definite instructions and it should be made sure that these instructions are understood. It is with this idea in mind that office routine is embodied in office manuals and that modern management trains new employes with the manual as a basis.

All changes in routine and all new instructions should be in writing. It is well to have a formal acknowledgment of the instructions from employes in order to impress upon them their responsibility to observe the rules. An employe will rarely acknowledge on paper that he understands instructions unless he actually does so. Furthermore the insistence that all instructions shall be in writing helps to make them clear. When instructions are given orally, too much is frequently taken for granted, and when errors result it is human nature for the employe to resort to the time-worn answer, "I understood you to say, etc."

18. *Established policies.*—The establishment of definite policies leads to successful supervision. An organization that has not crystallized its managerial policies will have serious difficulty in controlling employes. For instance, absolute fairness in the handling of employes is a fundamental policy of good management. If certain employes are granted favors that other employes in the same class are not granted the latter are likely to show a tendency to work against the organization. Under these conditions effective control is made difficult if not impossible.

Again, if there is no definite policy of wages and increases, the employes who are getting less than others in the same class may feel little inducement to cooperate with the management.

19. *Publicity.*—A general appeal for the cooperation of every one will help toward effective control. The average employe, if appealed to in the right way, is more willing to cooperate than is sometimes realized. The following example in methods of supervision will serve as a good illustration of publicity.

One office manager was having considerable trouble with the problem of loud talking. In his weekly house organ which is distributed at the close of business each Saturday he published an article on the evils of loud talking in an office. In addition he had printed a series of six small cards, each bearing an individual appeal to eliminate this habit. On Monday morning when the employes came to

work they found on their desks one of these card reminders. Each morning during that week brought a card, different in color, wording and type making this same appeal. A somewhat different reminder of the same thought was displayed on the bulletin boards. Constant appeal over the period of the week cut down the loud talking to a point where it was negligible.

The same method has been successfully applied in meeting such problems as excessive lateness, unnecessary interruptions, untidy appearance of the office, etc.

20. *Punctuality.*—Continual lateness is one of those pernicious habits that tend to break down discipline and interfere with the smooth operation of an office. In a well-managed office punctuality on the part of every one will be insisted upon. This gives an effective stimulus to the day's work by starting it off right. In offices where punctuality is not enforced there develops a free and easy spirit which makes control more difficult.

Whether tardiness can be wholly prevented is doubtful. In any office force there will always be some who are careless or insubordinate. If a reasonable effort to correct their habits is unsuccessful the welfare of the office demands that they be removed.

Of course the department heads must first set the example of coming in on time. Unless they do so it will be difficult for them to induce the rank and file to do likewise.

The next step is to keep accurate records of attendance and to mark every one who is late. This will soon make employes realize that lateness will not be tolerated. It may eventually be necessary to let one or two persons go. Even when this is the case employes will not feel that they are being treated unfairly, provided no exceptions to the rule are permitted.

At Strawbridge & Clothier's store in Philadelphia tardy employes must go to the central desk and sign a slip. Since this plan was established lateness has averaged 2.5 per cent as against a former record of nearly 10 per cent. Bulletins on lateness are sent to the heads of each department.

In offices where the flow of work is hindered by absences, special plans must be taken to secure prompt attendance. The man who is always on time properly feels the injustice of having his work constantly hampered by the dilatoriness of a fellow employe. Some firms give a monthly bonus to employes who have been neither absent nor late during the month. Bonuses for longer periods are less effective.

21. *Absence.*—The absence of employes is a bigger factor of loss than is sometimes realized. Let the employer study the condition in his own organization and he may discover that such absence costs as high as 10 per cent of the total working time. The direct money loss is thus considerable, but an even greater loss is the resulting disorganization and

diminished output. In order to reduce the number of absences, the office manager must know their causes.

Absence averaging a day a month per employe may not seem to warrant any special occasion for inquiry. Yet in a moderate sized office of one hundred and fifty employes, absence at this rate would result in a loss of 1800 working days per year. An analysis of the causes of this condition would undoubtedly indicate that much of the absence is avoidable. A certain percentage of employes always take advantage of lax discipline touching absences, without considering the injustice done to their fellow-workers.

The employer owes it to his people as well as to the company to see to it that employes are not absent unless for sound reasons. It is not possible to do this without an organized system of ascertaining the reasons for absences and controlling the absentees. A study should be made of the number and causes of absences with a view to finding and applying a suitable remedy. One employer who had a large percentage of men suffering from colds found it advantageous to employ an expert to study conditions of hygiene and ventilation, and a doctor to give treatments. The results were gratifying. When other offices were losing the services of 10 per cent of their employes thru an epidemic of grippe, this firm had less than 3 per cent of its force so affected. In a Federal Government office where special efforts are made to maintain good working conditions, the

average time lost was only 4.82 days in the year for each of the 12,000 employes.

In an organization employing several hundred or more people the services of an attending physician will prove helpful in reducing unnecessary absence. If employes who are ill are required to see the company doctor before leaving the office and to consult him again upon their return, there will be little opportunity for taking off time to which they are not entitled. Furthermore a physician can accomplish a good deal in stopping contagious sickness, like colds, in an early stage and so preventing the spread of disease in the office.

A great deal of unnecessary absence may be eliminated if it is possible to have some one—preferably a company nurse—visit the home of the absentee. Employes who have feigned illness will not care to be visited, but those who are really ill will be pleased at the interest that is displayed by the office, and at the same time the representative of the office may determine whether or not the sick employe is receiving the proper attention.

22. *The "overtime evil."*—So common is the "overtime evil" that many self-termed "well-managed" offices look upon continuous overtime as unavoidable. It will pay the executive of a concern permitting any appreciable amount of overtime to conduct a thoro investigation of his office. He will probably find that after a few days of overtime, employes accomplish very little, if any more, work with over-

time than without it. In addition, overtime work so saps the energy of an employe that in the long run the concern is decidedly the loser.

The application of the proper methods of control can generally reduce overtime to a negligible item. A ruling against overtime must first of all be made by the highest managing authority of the concern. Department heads must be made to feel that overtime reflects against them personally. The routine must be thoroly studied to eliminate waste motion, poor routing and inefficient help. When it is evident that additional employes are necessary to eliminate overtime work, experience will prove the economy of hiring them.

23. *Complaints.*—In every organization, the handling of complaints is an item of considerable importance and when done properly should progressively eliminate future complaints. The centralization of responsibility for the proper adjustment of complaints is a splendid means for insuring careful handling. Complaint letters may be routed direct to the adjustment department for handling or copies of such letters may be sent to the department for analysis.

The adjustment department has access to all house records relating to customers. In this way it is in a position to run down errors and fix the responsibility for these errors. Centralizing responsibility for this work eliminates the practice of "passing the buck."

The adjustment department should make a weekly report to the office manager listing the complaints, avoidable and unavoidable, charged against each department. The report should show the nature and cause of the complaint and the person to whose carelessness it was due. This report enables the office manager to observe tendencies toward carelessness in any department and to detect indications of outgrown systems.

Not the least important part of the value of the adjustment department lies in the fact that the experience gained thru its investigations places it in a position to offer constructive suggestions for improving ineffective routines.

REVIEW

What is the difference between a centralized and decentralized office?

Name some of the advantages of a centralized office.

What are the principles of effective control?

If you were an office manager, how would you go about enforcing the rules of the office?

Why is it advisable to centralize the handling of complaints?

CHAPTER IV

ORGANIZATION AND CONTROL (*Continued*)

1. *Need of planning.*—Altho scientific management has long been the back-bone of factory management, it is only recently that similar attention has been given the office. The establishment of large central offices where clerical work of every type is handled in large amount has necessitated a more careful study of methods and systems. Today, therefore, the active office manager is inquiring whether principles of scientific management can be applied with benefit to his own problems.

One of the fundamental principles in scientific management is the careful planning of operations. This is just as important in the office as it is in the factory. There are always problems to be solved with regard to rush work, to special work and to probable slack periods. Unless definite machinery is provided to handle changing conditions and to plan for necessary adjustments, disorganization is likely to result. It is possible, of course, to plan the work without having recourse to a special planning department. Except in very large offices the planning will be done by the office manager or one of his assistants.

Planning as applied to office work means determining the best equipment, the best methods, and the best individual for doing a certain type of work.

2. *Value of planning.*—The office manager is held responsible for "results." In his case "results" mean handling the various kinds of work efficiently at a low cost, without alternative periods of extraordinary pressure and under work. Without proper planning, the loss of time thru unnecessary motions and costly fluctuations in output may reach an appalling figure.

The receipt of 300,000 letters a year, for example, means that many letters have been opened, unfolded, read, considered, acted upon and answered. If in this process of many steps a single unnecessary one is taken, the aggregate waste of time is considerable. By planning, we endeavor to eliminate every unnecessary step, every unnecessary motion, and all uncertainty.

Planning considers the best equipment, the best methods and the best individuals for handling a given type of work. These factors embrace the elements of routing and scheduling. Routing determines the exact steps in the process to be followed. Scheduling fixes the receiving and sending out of work at the proper time on the basis of a predetermined scheme. In some offices the work of every one begins at a certain fixed hour. At that hour the mail is opened and then distributed. By the time the day's mail reaches the persons for whom it is in-

tended, it may be well along in the morning. On the other hand, in the properly planned office, the mail openers arrive early enough to have the mail opened and distributed before the arrival of the correspondents. Planning obviates delays both at the start and at any other time during the day.

3. *Effect of layout.*—The various units or departments which make up the office must be coordinated actually as well as theoretically. No factory manager would tolerate an arrangement that required jobs to tack back and forth across the factory until they were completed. Yet it is surprising how many big offices permit just such conditions. While it is not always possible or even desirable to follow blindly the geometric axiom that "a straight line is the shortest distance between two points," it is well to remember that waste motions cost money and should be reduced to a minimum. Keeping in mind the principles of layout as explained in Chapter II will be helpful in the work of planning office operations.

4. *Effect of equipment.*—The character of office equipment has an intimate relation to planning the work of the office. For example, in one office two girls spent several hours a day placing cards in a vertical file. The file covered an area of about 50 square feet. Only a small percentage of its drawers were at a convenient height. It was therefore necessary for the girls to stoop or kneel most of the time. The substitution of "tub" desks made it possible for one

girl to do all the filing, and do it while comfortably seated. This is an interesting instance of results that can be accomplished by intelligent planning as to equipment.

Planning may likewise be applied to such ordinary duties as opening the mail. It determines the saving effected by the use of machines as compared with hand work. Even in doing the work by hand—supposing that the purchase of a machine is not yet justified—important economies may be made by determining the best method to be followed. The office manager who has not studied this apparently insignificant operation may profitably do so.

Again, in sealing envelops, the untrained clerk licks the gum and pounds each envelop several times to seal it. A trained clerk uses a sponge, wets a dozen flaps at a time, stacks them loosely and compresses them with a weight, leaving time to do the rest. When thousands of envelops have to be sealed every day, failure to do it in the most expeditious manner means a loss of time which will mount up to a considerable sum of money in the course of a year. In offices where large numbers of letters are sent out, the work of dampening the gum and closing the envelops is of course, done by machine.

Effective planning takes advantage of every opportunity to instal equipment that will handle work more quickly and therefore more economically.

5. *Routing.*—As an illustration of the problem of routing, consider the course taken by mail from the

time it is received until it is finally disposed of. Criss-crossing and doubling back is a frequent cause of lost time and should be avoided. The situation can be visualized as already explained by making a plan of the office, and tracing the course of mail from desk to desk. It will usually be found that there is much retracing of steps and that this can be reduced by proper routing. It may be worth while going to considerable expense in rearranging desks to avoid lost motions and delay incident to improper routing.

A mail reader at the point where letters are opened can route them directly to the proper correspondents. If the previous correspondence is required, in order to answer a letter, a good planning system will provide for the letter being sent first to the filing department and thence to the correspondent. In this way the correspondent is not delayed by having to send for the correspondence himself.

6. *Scheduling.*—If the office details have been standardized, and the routine is understood by all concerned, it is a comparatively simple matter for the office manager to schedule the flow of work from one department to another.

For example, examination may show that a typical order needs a dozen operations for its completion. The first operation takes one minute; the second, two; the last, let us say, twelve minutes. Obviously, there must be twelve times as many workers doing the last operation and twice as many doing the second as

there are doing the first, in order to finish in the same length of time and prevent accumulation of work in the later stages of the process. When the correct schedule is set, proper steps must be taken to see that it is maintained. This may be done by means of time stamps showing when and by whom the order is received in each department, and the time when the particular operation is finished. The effect of this automatic check on "running time" is very marked.

The schedule is the basis for action. By scheduling, we see to it that each piece of work, instead of being passed along in a casual fashion, is started and finished within a given time.

7. *Standards.*—Before standardization can be effected, the various operations involved in the passage of any order thru the office must be carefully studied. Each operation has to be considered in relation to the other operations as well as by itself. The right routing of the order will then have to be determined and the times for the operations repeatedly taken and compared before an appropriate schedule can be fixed. Thus standards may be evolved with reasonable certainty as to their accuracy. They should be the basis of all routine work and no deviation from them should be allowed.

Having established standards, it is the duty of the office manager to ascertain how well they are maintained. This he does by means of records, checking the actual with the expected performance. Comparative reports should be maintained, showing the

total amount of work done, the time required to complete it, and the average output per hour. From this the capacity of each clerk is learned and a record is kept of his progress or retrogression. Moreover, a satisfactory basis for ascertaining cost is established, because the time required for each piece of work, as well as the number of pieces, is known.

Good planning requires that standards should be as fair and comprehensive as they can possibly be made.

8. *Studying processes.*—In factories where the work frequently consists of a constant repetition of simple operations, much insight into the best way of doing things has been gained from time and motion studies. Even tho the observer with a stop watch may have no place in an office, as some claim, there is much to be learned from his activities. Here as elsewhere it pays to study minutely how the work is done in order that by using the best methods the fatigue of the worker can be reduced to a minimum, and the inefficiency caused by waste motions and extra steps avoided.

Such a study may reveal waste thru ineffective equipment or improper layout, or it may show that the duties assigned to the worker are not those that produce the most effective use of his time, or that he unconsciously wastes his time by an inexpert handling of the tasks given him. It is the last two situations to which we would draw attention here, the first two having already been noted.

If a typist is obliged to leave her desk several times a day in order to obtain forms required in her work, if it is necessary for a bill clerk to consult more than one record to secure information regarding a customer's account, or if mailing clerks make more motions than are necessary to dispatch letters, the study of processes will bring these conditions to light and point the way to correcting them.

Such a study frequently reveals the fact that office clerks are combining operations which require different degrees of skill and intelligence. It may then be found that the operations can be separated so that the work of each clerk can be confined to the duties for which he has the greatest aptitude. Again, such a study will often show varying scales of accomplishment for persons assigned to the same work. A careful scrutiny of the work of the best and of the poorest workers may reveal the reasons for particular excellence and the knowledge thus gained may serve to raise the general standard. Thus new methods can be devised so that lost time and energy can be utilized productively.

In making such studies the basis for improving clerical service, care must be taken that the methods pursued are adequate and that they do not antagonize the workers. The office manager should not only keep in mind the fact that he is in partnership with the employes but should instil this feeling into them, so that they will be interested in cooperating effectively.

9. *Planning ahead.*—Planning is not limited to a

consideration of conditions from day to day, or from week to week. At the beginning of the business year, whether the calendar or a fiscal year, the office manager should prepare a budget, estimating the number of employes required to handle the work anticipated in each department of the office for a period of six to twelve months ahead. This budget should show the personnel requirements by departments and by months. To prepare such a budget intelligently it will be necessary for the office manager to inform himself as to the plans of every branch of the business.

If the actual results achieved do not harmonize with the budget thus prepared, and this is frequently the case, the disagreement whether great or small should lead to a careful scrutiny of probable causes. It may be that unforeseen and perhaps unfavorable fluctuation in the assumed volume of business are at the root of the difficulty. On the other hand, the office manager may have estimated erroneously the capacity of his force to handle a given volume of business or his people may have fallen short of his reasonable expectations. In the latter case the budget becomes a standard by which he may measure the operating efficiency of the departments under his jurisdiction.

10. *Meeting fluctuations in work.*—In practically every business organization there are fluctuations in work, due to increase or decrease of business, unavoidable absence, vacations, etc. The growing, pro-

gressive organization determined to serve its customers promptly must be in a position to meet these fluctuations and carry on its work regardless of conditions. The most practical method of handling the situation is to train a reserve force of people, who may be called upon to fill in on different types of work. In one large organization the management has developed this idea to a point where it can meet any normal fluctuation of work without difficulty. First of all, substitutes have been trained for the various positions in the organization. This has been done in most cases by drilling each employe to fill the position ahead of him. The plan insures the work being carried on despite the absence of any individual, and also serves as an incentive to the employes to learn more of the business than just their own work. It also enables the management to make promotions intelligently and on short notice.

Certain types of work may be held in abeyance for a short time without seriously affecting the business, and thus makes possible prompt handling of necessary work. Then temporary help can be trained in a very short time to fill the least responsible clerical, stenographic or typing positions during a "peak" period.

The advantage of the plan is, that tho the temporary help cost a trifle more for the period of employment, in the long run it is economical for the reason that temporary help may be discharged as soon as conditions become normal again and there-

fore does not become a permanent burden to the payroll.

11. *Daily planning.*—There is of course need for careful planning from day to day and week to week. The fact that planning must be done daily does not mean that it can be accomplished successfully under a "hit and miss" scheme. Daily planning requires the person responsible for this work to have all available information as to uncompleted work on hand, new work coming in, and standards of output. The office manager should have this information in convenient form. Chapter XI on work reports describes the various types of reports that can be used as the basis for planning.

12. *Planning board.*—To visualize the ascertained facts regarding the progress of the work a planning board is sometimes used. It consists of a number of consecutive spaces, one for each section of a given job. A pin is stuck in each space and remains sticking there until that section of the job has been done, when it is removed. When all the sections have been done, the board is clear.

In a large office where many pieces of printed matter are put thru during the year, the board is so placed that the manager can conveniently answer over the telephone questions relating to the progress of the work. By this means he can have all the details of the job at his fingers' ends. The operations in the office are divided into ten main sections. As each page of matter is completed, the date is marked

in the appropriate section and the pin is removed. In the same space has already been marked the date upon which it was expected that the operation would be completed, and it is therefore possible to determine what work is behind schedule, and take steps to hurry it.

To set forth clearly the condition of certain more important phases of the work, such as correspondence in the stenographic department, billing in the accounting department, filing of correspondence, etc., a planning board composed of sliding rules to represent each class of work, can be devised. These sliding rules, moving from left to right along a scale of figures, will vividly record the amount of work done at any time, and a comparison of the rules representing work on hand, with rules representing work finished, will furnish a complete statement of conditions. "Work on hand" can be represented by one color and "work completed" by another, the units of the sliding rules being painted accordingly. The figures can be understood to denote "number of jobs" or "hours to complete," depending upon the element one desires to emphasize.

13. *Graphic charts.*—Simple graphic charts may be used in place of, or, along with, planning boards. For example, charts such as the following will prove helpful:

(a) Showing fluctuations in receipt of the more important classes of work

(b) Showing fluctuation in average time to com-

plete the various classes of work in each department

(c) Showing fluctuations in average number of pieces of each important classification of work handled per day, or hour.

These charts should be accessible for quick reference and kept up to date by some one who is interested in the work.

REVIEW

Why is planning such an important factor in efficient office management?

What elements are embraced in planning?

Is motion study applicable to office work?

Suggest ways of meeting fluctuations in work.

CHAPTER V

OFFICE EQUIPMENT AND SUPPLIES

1. *Standardizing equipment.*—The principle of standardization should, as far as possible, be applied to all pieces of equipment in the office. Uniformity in material and design of desks, chairs, tables, filing equipment and bookcases is desirable, by reason of the better appearance and greater interchangeability of the articles.

2. *The modern desk.*—Style and arrangement of the modern desk are simple. Ornamentation is omitted so as to increase efficiency and leave no unnecessary lodgment for dust. The older type of desk, boarded from the floor to the top, is giving way to the sanitary type which stands on four legs. In cities like New York, however, where rent is high and floor space valuable, the older type of desk with drawers to the floor is sometimes favored on account of the extra facilities which it affords.

The quality of material in office equipment has steadily become better, for several reasons. In the first place, it is being realized to an increasing extent that cheap equipment does not last. Again the appearance of the office and the impression which it makes upon customers is recognized as being determined largely by the type of office equipment.

Lastly, the appearance of the office and the quality of the office equipment has been found to have a definite psychological effect upon the character of work done by the employes.

3. *The roll-top.*—The old roll-top desk is going out of use. Its pigeonholes were only too convenient places for stuffing papers that should have been placed in files. In the readiness with which the roll-top desk may be closed at night and made to present an appearance of order lurks a temptation not to finish the day's business and clear the desk each day. In addition to its other disadvantages, the roll-top desk by reason of its high back deprives the department head of an unobstructed view of the men under his supervision. It also shuts out a certain amount of light from the room.

4. *The flat-top desk.*—For general clerical work the standard flat-top, single pedestal or double pedestal desk is the best. The double pedestal desk is usually five feet wide, three feet deep and thirty inches high and provides drawers on each side and one in the center.

5. *The "efficiency desk."*—The desk of a clerk or stenographer should have no more drawer room than is necessary to contain the necessary supplies. It should have no space for storing books that should be in the library, folders that should be in the files, papers or envelops in excess of current needs. Many firms have evolved or adopted certain types of desks built along these lines. For example, the

Equitable Life Assurance Society has what it calls its "efficiency desk," which is thus described:

> The Equitable Efficiency Desk is fifty inches long by thirty inches wide, with linoleum top and aluminum shoe and level edge binding. It is of quartered oak construction, dull finish, containing three drawers, the center providing compartments for working materials such as clips, pins, elastic bands and pencils. The side drawers contain an adjustable compartment for letter paper, pads, and stock forms, set slantingly for compactness and accessibility.
>
> One of the advantages of the desk is that clerks can not stow away in it papers which later will be overlooked. With it a clerk works with greater expedition, and there being no room for placing current work, the tendency to defer until tomorrow what can be done today is almost entirely eliminated.
>
> The drawers in the "Equitable efficiency desk," are so narrow that the desk looks much like a table.

6. *Special desks.*—There are various special-type desks or "service desks." The commonest example is the typewriter desk. When the typist has also clerical work to perform, the typewriter is fastened to a disappearing tray, the top of the desk closing and providing a smooth surface for writing. If the typewriter is little used, a small typewriter stand may take the place of a special-type desk.

Another type, the so-called "tub desk," serves the needs of clerks who handle large numbers of card records. The clerk sits between two "tubs," connected by a small writing surface. The "tubs" contain index cards, address cards, ledger accounts (if the ledger accounts are kept on cards), etc. Any

card in a group of ten thousand is within arm's reach of the clerk. The compartments have sliding panels and can be immediately uncovered. The covered compartments provide additional writing space.

7. *Office tables.*—Office tables are used for a variety of purposes, such as sorting mail, carrying equipment and serving clerks who perform routine tasks. They are also used at board or committee meetings. In the executive's office the table often serves as a place for storing or displaying books, maps or large papers, or as an overflow space upon which to work when his desk is full. If a visitor is seated by such a table, the executive can turn and talk to him without exposing confidential papers on his desk.

8. *Office chairs.*—It is worth while to give some thought to the selection of chairs which are used seven or eight hours every day. Typists and stenographers should be supplied with the special chairs designed for them in which the height and the angle of the back are adjustable. In the case of chairs not adjustable, the use of leather cushions or foot stools often gives added comfort and promotes efficiency.

Many offices are without sufficient chairs, not only for visitors, but even for their employes. It is generaly desirable to have a chair for each desk or table, even tho it is not continually occupied.

9. *Desk equipment.*—Certain features of modern desk equipment not in common use are worthy of mention.

Many executives have plate-glass tops which cover

part or all of their desk surface. Beneath this can be put charts, reports, telephone numbers, engagement lists, and any other material that it is desirable to keep in view. Glass tops are easy to keep clean and they look well. An objection to them is that they reflect the light.

Work trays are another form of desk equipment. Two work trays marked, "incoming" and "outgoing" are often used, the former containing work which the desk owner receives from some one else, the latter work finished and ready for the office boy to take away.

No one who is doing more than routine tasks should be without a calendar and an engagement memorandum. The loose-leaf calendar combines these features. Fountain pens are frequently supplied to clerks who have a great deal of writing to do; sometimes separate fountain pens being used for different colored inks.

10. *The file drawer.*—There are a number of variations in the construction of desks. One can obtain from standard manufacturers, desks to suit almost any need. A favorite arrangement for executives is to have a deep, lower drawer to carry a set of folders for holding confidential correspondence or the working material which the executive most frequently needs. By dropping suggestions and memoranda into a classified file of this sort, a man can accumulate a wealth of information on any subject about which he reads and thinks. The middle drawer of the desk

is the least useful. To open it, the worker must push back his chair. For that reason the drawer is sometimes omitted from the modern desk.

11. *Orderly desks.*—The orderliness with which desks are kept, and especially the manner in which the day's work is cleaned up before the employe leaves, should be ascertained by frequent inspections. Such inspection will serve another purpose as well. It will often be found that a clerk—or an executive—does not keep "on top" of his work because too much work is given him. There are men who continually work under an overload of just this sort. There is always something being neglected or shoved aside, and the fault may not be with the man. It may be found too that more and better work can be done if the desk or working table is cleared of incumbrances. The more orderly the desk is inside and out, the easier it is to get at and dispatch whatever work may be on hand. "The busier the man the clearer the desk" is a saying the truth of which has been proved many times.

12. *Modern files.*—The old-fashioned, unserviceable cardboard box file has been discarded in the best houses for modern multiple-unit vertical filing drawers. The discarded cardboard boxes can often be used for transfer files. For filing cases, durable units, interchangeable and capable of easy extension, should be chosen. Rarely does standardization bear more fruit, in the important matters of economy and convenience, than in the case of filing equipment.

If the filing equipment is in the same room with office furniture, regard for appearance requires that the material of both should be the same.

The various filing units of each manufacturer are so nearly interchangeable that it is possible to purchase almost any desired combination of letter-file drawers, card-file drawers and card-index drawers, provided the cards used are the standardized sizes. Small desk card-index trays are indispensable to some executives. They can be purchased to fit any desk drawer.

13. *Fire resisting cabinets.*—In every organization there are certain records that are invaluable to the operation of the business. Some of these records are unreplaceable; others could only be replaced at a prohibitive expenditure of money and effort. It will pay any organization to make a careful survey to determine those records that should receive a high grade of fire protection. There are companies manufacturing fire resisting cabinets that not only will protect records under severe fire conditions but will also withstand falls and impacts incident to a fire.

14. *Bookcases.*—Because of the dust in offices, books should be kept behind closed doors. An office library is usually built up from a small beginning. For both reasons, therefore, the most suitable form of office bookcase is the multiple unit case, equipped with sliding glass doors. Sections can be added as rapidly as needed. They should be of the same material as the other office furniture.

15. *Office supplies.*—Space does not permit the proper treatment of the principles of purchasing in this volume but there are a few specific items in connection with purchasing for an office that may properly be covered here.

The term "office supplies" includes primarily paper and printed forms; it also stands for the whole miscellany of office paraphernalia with the exception of the larger items of office equipment already described. Standardization of supplies results in savings in the purchase price, just as in the case of equipment and office appliances. In a large office there is a perceptible advantage in standardizing even lead pencils and purchasing in bulk for the whole office. The same is true in the matter of pen holders, inkwells, paper clips and numerous other items.

16. *Forms.*—It is said that many concerns pay high prices to printers for forms which ought to be standardized, and sold by stationery stores. The stationery houses already have standardized such forms as shipping receipts, receiving records, different kinds of vouchers, loose-leaf forms, cards and ruled sheets. At the same time it is necessary to exercise caution in taking over whole sets of office forms put out by the so-called system manufacturers. It is seldom that a ready-made system can be applied in its entirety to an office. The attempt to do so is likely to result in an adjustment of the office to the system, rather than of the system to the office.

Most offices have some forms that are really use-

less. This is either because the information contained in the forms is recorded elsewhere, or because it is being collected for an emergency which in all probability will never occur. In a large office, it is not impossible to start a system of records and forget to stop it when the reason for its use has passed. A close check, therefore should be kept on forms in use and on new forms recommended.

17. *New forms.*—Any proposed form should be examined to determine how it is to be used and what results may be expected from it. In large concerns one person should be responsible for the preparation and ordering of new forms. He will be able to reduce the number to a minimum by combining and revising existing forms to fit all needs. If the form is to be printed, the convenience in printing is worth considering. The size of paper ordinarily used for office forms is 34 × 22 inches, while the usual size of the cardboard used in making card forms is $22\frac{1}{2} \times 28\frac{1}{4}$ inches. There is economy in preparing forms of a size that permits the sheet to be cut without waste. For example, there are eight $8\frac{1}{2} \times 11$ sheets (the standard letterhead size) in the 34 × 22 sheet. The standard card forms are 3 × 5, 4 × 6 and 5 × 8. It is advisable to adapt forms to fit one of these sizes. If the forms are to be used on the typewriter, the dotted lines (often wholly unnecessary) should correspond to the typewriter spacing.

When the quantity of miscellaneous forms is fairly large it is often economical to print them in the office.

The use of small printing presses or reproducing machines described in Chapter VI will be suitable for this purpose. It is unnecessary to consider artistic design or fine printing on forms that are intended solely for office use.

Letterheads should receive attention from the viewpoints of standardization, cheapness and advertising value. The modern practice is to use lithographed letterheads because of their neat appearance. If ordered in sufficient quantities, the price is not very much higher than that of ordinary printing.

The question of buying paper direct from the mills should be considered when large lots, special runs or special grades are required. Nearly all printers make a handling charge for paper, and the saving of this charge may be worth while.

18. *Graded supplies.*—Economy in purchasing is obtained, as already stated, by means of standardization. But economy is also at times secured by the opposite method of splitting up the purchases into different grades. For example, while the stationery used for correspondence with the outside world must be of a high grade, cheaper paper, envelops and forms often suffice for inter-departmental communications. Water-marks have an advertising value in the firm's outside correspondence, but they are an extravagance when used in office forms. A good quality of paper is needed if erasures are frequent, if ink must be used in writing, or if records are to be kept for a long time. An executive frequently requires a specially

high grade of private correspondence paper, cut to a non-standard size; distinction is added by the very unusualness of the paper's appearance. Too great cheapness, moreover, does not pay, even in the purchase of the most ordinary supplies.

19. *Stocks of supplies.*—In a well-kept stockroom office supplies will be kept in an orderly and easily accessible manner. Adjustable steel shelving is ideal for this purpose. Where the stockroom is not reasonably free from dust, stationery should be kept inclosed. Another requirement of a good office stockroom is a system of records serving as a perpetual inventory for each item of supplies. Such a record for each item may often be kept on a 3 × 5 index card, the amounts received, delivered, and balance on hand being carried in parallel columns. A "low limit" is written in a space at the top of the card, and when the balance approaches that limit, additional stock is ordered. This is important since a sudden shortage in supplies may entirely hold up part of the office work.

The stock card on page 70 indicates the rulings generally used.

20. *Rate of consumption.*—Office supplies and stores are funds in concrete form, and should be handled just as carefully. Stores should not be issued except upon proper requisition, and the rate of consumption should be checked periodically with that of former periods. It should be a fixed rule that all supplies, except those immediately needed,

MAXIMUM_____

MINIMUM_____

STOCK CARD

FORM NO._____

NAME_____

PRICE_____

ON ORDER		RECEIPTS			DISBURSEMENTS			BALANCE	ON ORDER		RECEIPTS			DISBURSEMENTS			BALANCE
QUANTITY	NO.	DATE	NO.	QUANTITY	DATE	TO	QUANTITY		QUANTITY	NO.	DATE	NO.	QUANTITY	DATE	TO	QUANTITY	

Figure 1.

must be kept in the stockroom and not lying loose about the office or in the desks.

REVIEW

What is the value of the principle of standardization as applied to desk equipment?

Discuss the various types of desks and their uses.

Name some of the uses to which office tables may be put.

What is the value of desk inspections?

What should be considered when ordering new forms for use in an office?

CHAPTER VI

OFFICE APPLIANCES

1. *Labor-saving machinery in the office.*—The United States and Canada have led the world in developing office appliances and office machinery. We have mechanical substitutes or assistants for messenger boys, stenographers, mailing clerks and statisticians. In the modern office there are few individuals and fewer operations for which mechanical assistance can not be provided. It is strange that many a concern which has equipped its factory laborers with every device that could heighten their efficiency hesitates to adopt labor-saving machinery in the office. Such concerns feel that office work is largely brain work and not subject to mechanical laws. The study of psychology would tell them that the brain merely starts the impulse to action. The action itself is virtually mechanical and can be reduced to mechanical motions.

2. *When to purchase.*—Office machinery should ordinarily be purchased only when it is certain to pay for itself in the course of a reasonable time. The office that sends out only a few letters a day does not need dictating machines or mailing machines. Yet economy is not the sole consideration. Even when

an appreciable money saving can not be effected the purchase of a machine may sometimes be justified because of the better or faster work that it does and because it prevents mistakes.

3. *Records of efficiency.*—Before buying an office appliance or a piece of machinery, it is usually wise to test it in your office routine. A careful comparison should be made of competing types, so that the one best suited for the work may be chosen. A record should be kept showing date of purchase, serial number of the machine, cost of repairs and cost of supplies. A machine may not cost much in the beginning, yet thru frequent breakdowns and repairs become an expensive annoyance. A record will also be of value when the time comes to add to the equipment.

4. *Machine groups: typewriters.*—Office appliances or machinery may be divided into several kinds. The first and most important of these is the typewriter. Durability, ease of operation, cheapness of repairs and quality of work are the deciding features. The quality of work depends partly upon the type face chosen. One can obtain for any standard typewriter the choice of several type faces, from the small **elite** type suited for personal or social correspondence, to the large **pica** type designed for purely commercial work.

It is desirable that all the machines in an office be of the same make. Operators and machines then become interchangeable. Extra machines kept for

emergency will take care of a breakdown anywhere in the office.

5. *Special types.*—The noiseless typewriter, which has been on the market for some years, is coming into wider use. It is particularly suitable for secretaries who work in the room with executives. The machine has a mechanism allowing for different numbers of carbon copies or different thicknesses of paper or cards.

A special roller is in the market that may be adjusted to any typewriter and that makes it possible to type on cards.

The flat top machine, better known as the billing machine, types cards or other material of such a size as would not ordinarily fit the roller of a regular typewriter. The machine has no roller, the paper being placed on the flat top and fastened down. The type strikes downward instead of upward, as in the case of the ordinary machine.

When a large quantity of cards is being typed daily, it has been found practical to get them in sheets of eight or ten cards perforated to size. In this way, ten cards may be typed with one insertion and can afterwards be separated.

Numerous modifications and elaborations of the typewriter have been made for bookkeeping purposes. Machines can be obtained that will do all the entry work in an ordinary loose-leaf system. Combinations of mechanical mathematical machines and the typewriter reduce all bookkeeping to a state of simplicity

that it has never before attained. These are described in the following chapter.

6. *Care of typewriters.*—Care of the typewriters should rest with some one person. It should be his duty to see that the printed rules for the care of typewriters are observed, that the machines are covered when not in use, that the type is regularly brushed, that track and bearings are oiled at least once a week. Change of ribbons, for example, where the number of machines warrants it, should be made by a man accustomed to that work.

Large companies frequently employ a mechanic to make regular inspection of the typewriters. Smaller users may arrange with the manufacturer for periodical inspection. A typewriter should not be kept until worn-out. Much time is frequently wasted upon a defective machine when the tabulator does not work well, when the spacing gear is worn or the carriage sticks. Good work can not be done with worn-out type or imperfect alignment. Old machines need not be scrapped; they can, as a rule, be traded in for new ones at a fair allowance.

7. *Copy-holders.*—An important typewriter accessory is the stenographer's copy-holder. The papers to be copied are held directly above the typewriter at the back or a little to one side. A movable metal bar on the holder marks the line of the stenographic notes or other matter that is being copied. The arm that raises or lowers the bar is next to the keyboard of the typewriter and can be operated at a touch.

8. *Dictating machines.*—Dictating machines replace the skilled stenographer by the typist. The dictator talks into a tube or horn which carries his voice to a wax cylinder revolving on an electrically operated spindle. When the dictation is finished the cylinders are taken to the "reproducing machine" used by the typist. This machine is a duplicate of the dictating machine, except that there is a hearing tube with branches that fit into the operator's ears. The typist's hands are thus left free to operate the typewriter. The reproducing is controlled by either tapping an electric key set beside the typewriter space bar or by a pneumatic release pedal. The cylinders once transcribed, are put into a shaving machine, which removes a thin layer of wax and thus prepares the cylinder for a new impression.

9. *Advantages of dictating machines.*—The dictating machine saves the time which would be spent by a stenographer in taking dictation and in waiting for it. The dictator may talk as fast as he wishes and at any time for the machine is always ready for him. If necessary he can dictate outside of office hours or even at home. A further advantage is that one typist can often transcribe the dictation of two or more dictators.

By "reversing" the needle, a dictator can hear what he has said. By means of either a correction pad or a celluloid index slip he can indicate the length of the letters or other dictation and also indicate any necessary alterations in his dictation.

Great savings are effected in handling a mass of routine correspondence by having it transcribed from reproducing machines in a central department.

10. *Disadvantages of dictating machines.*—When the volume of work is heavy it is often impossible to have letters written on the same date as dictated, if the cylinders are transcribed in the order received. The granting of preference to "rush" cylinders tends to break up the effectiveness of the system. Executives usually do not wish to wait for their letters. Their correspondence, too, may be of a private nature, which they do not care to intrust to the general office typists.

In many cases the use of dictating machines meets with opposition either because of ignorance or the unwillingness of persons to learn to operate them. To use the dictating machine advantageously, the dictator must think clearly and express himself grammatically. He must learn to speak distinctly, pronouncing every syllable and mentioning every mark of punctuation. Older employes are sometimes unwilling to make the effort necessary to learn these things.

11. *The stenotype.*—The stenotype is designed not to replace the stenographer but to increase her efficiency. It aims to do for stenography what typewriting has done for longhand. The operator records the dictation direct in the stenotype machine. Combinations of ordinary letters are printed on a strip of paper by means of twenty-two keys and can be de-

ciphered by any one familiar with the code. The stenographer writes her letters from these stenotyped slips. It is said that an ordinary operator can "take" words at the rate of as high as 150 per minute while an experienced operator can take 250 words per minute. This rate of speed obviously exceeds ordinary commercial needs. The present use of the machine is primarily for such purposes as rapid-fire conferences, lectures, or the court-room.

12. *Copy presses.*—The next group of office appliances comprises duplicating machines, designed to reproduce correspondence or other types of material already prepared. The old-fashioned copying press has all but disappeared. By that process a letter, typed with an indelible ribbon or written in indelible ink, was copied into a tissue-paper book. It is still commonly used in law offices, where it is considered important to keep original records of documents. The method is cumbersome and the time wasted is considerable.

The modern form of this particular duplicating machine is the rotary copy press. The letter to be copied is inserted, face downward, between two rolls. As it is run between these rolls, it is pressed against very thin copy paper which has been moistened and which is then wound up on a reel. When the copy dries, it is cut to letter size and filed. It is claimed that its use saves the time necessary to insert carbon paper in a typewriter. However, the thin copy from the rotary presses is difficult to handle.

13. *Automatic typewriters.*—The automatic typewriter is perhaps in the highest class of duplicating machines. It is an actual typewriter, electrically operated. In one type of automatic the keys are controlled by a perforated stencil, which works on the same general principle as the music roll of the mechanical piano. The stencil is punched on a special machine equipped with a typewriter keyboard.

The automatic typewriter is used primarily in writing form letters. The address and any special paragraphs can be filled in.

Conservatively the automatic is capable of doing as much work as three good typists. Its economy obviously depends upon the number of letters to be sent. If the number is small, it is cheaper to have them typed directly than to cut the stencils and have the high fixed charges of the automatic typewriter distributed over a few letters.

14. *Stencil or gelatine duplicators.*—The average duplicating machine, however, is much cheaper as well as simpler than the automatic typewriter. A stencil is made, usually on the typewriter, and attached to an inked cylinder. From this any number of copies can be drawn off. This machine can do an immense amount of work in the way of getting out sales lists, salesman's instructions, price-lists, folders, report blanks, bulletins, postal cards for circularizing, and even in printing the house organ.

Similar to the stencil duplicator is the gelatine

duplicator. The quality of reproduction, however, is usually inferior to that of the stencil duplicator.

15. *Type machines.*—For a higher class of duplicating work the multigraph is used. Its type letters, the same as those used in the company's typewriters, are set on a rotary drum which is pressed on an inked ribbon and so imprinted upon paper. "Imitation typewriting" is thus produced. An address can be filled in, and a letter produced which is difficult to distinguish from a typed letter. This, like other duplicating machines, is much more efficient if electrically operated. The machine produces a clearer copy than the duplicating machine; the impression dries quicker and the ink is not smudged.

16. *Printing presses.*—Finally, among the duplicating machines we have the office printing press. It is, however, expensive to own and operate and unless a large volume of work can be provided for it, it is cheaper to have the work done by a printer. The printing press can be used to print the firm's house organ, perhaps its letter-heads and envelops, and a great volume of circular and other literature for customers. The question of purchasing a printing press resolves itself into the question: Have we enough work and the right kind of supervision to make it pay?

17. *Photographing machines.*—A special type of duplicating equipment is the photographing machine. A special type has been developed for business purposes that does not require expert use. A sheet of

paper, a drawing, a page of a book is photographed, without the intervention of a plate or film directly upon specially prepared paper, which when submitted to a chemical bath gives a negative of the document photographed, white spaces appearing black and black lines and print appearing white. If this negative print is used for the preparation of further copies the latter reproduce the originals exactly. The first large-scale adoption of these machines was by the insurance companies, which used them to produce duplicates of their policy applications. Today the machine is used for a variety of purposes. It reproduces ledger pages, plans and specifications, tracings, signature cards, securities and many valuable documents.

This machine offers the simplest method for reproducing a complicated statistical exhibit. The New York Public Library has such a machine which, upon demand, may be engaged to make reproductions of material in the library, the reproductions being sold at a nominal cost to patrons.

REVIEW

What should be considered before office machinery is purchased? How should it be tested?

What are the peculiar advantages in installing uniform typewriters?

Under what conditions, in your estimation, will it be advantageous to substitute dictating machines for stenographers?

Compare the various duplicating machines and indicate when each will be the proper machine for installation.

CHAPTER VII

OFFICE APPLIANCES (*Continued*)

1. *Communication machines—the telephone.*—Communication machines form the next group of office machines. First and foremost among these is the telephone, which is the principal means of communication between the office, the factory and the world outside. As a general rule, it is better to have too many than too few telephones. The outside dealings of an office can not be efficiently handled unless there is a sufficient number of them in the office. The switchboard operator can save a great deal of time and confusion by properly directing the traffic of incoming calls and calling outside persons. If the switchboard does not occupy the operator's entire time, some supplementary routine task can be assigned to her. The important matter of telephone courtesy should be emphasized when the operator is trained for her work.

2. *House telephones.*—When there is a switchboard operator it will usually be found advisable to use the outside telephone installation for purposes of communication between persons in the office.

When there is no switchboard operator or when the volume of inter-departmental communication is so great that it overloads the switchboard, the auto-

matic or house telephone system is of service. Each extension of the latter can make connection with every other telephone on the line, which is wholly independent of the public telephone. By use of the telephone for office communications, employes can "talk instead of walk," and thus save time.

3. *Executives' telephones.*—An executive, unless protected from interruption by telephone, would be frequently prevented from doing concentrated work or holding conferences. The switchboard operator is usually too busy to afford him such protection. It is the duty of his private secretary to receive his calls, handle all business that is of routine nature, and arrange for the postponement of even important calls when the executive must not be disturbed.

4. *The telautograph.*—The telautograph is an instrument which transmits handwriting electrically. The message is written by means of a pen on an automatic shift roll which guides another pen electrically, at each receiving station. Persons writing on the telautograph can communicate a message in the same handwriting to any connected receiving station in the same building or even miles away.

The telautograph, which is an expensive installation, was first used by hotels for communication between the desk and the floor maids. The system is now used in banks and department stores to obtain credit information without having to ask aloud for it in the presence of the person investigated. It can be used by the reception clerk to announce call-

ers to executives and for many forms of intercommunication in the office where a written message is preferable to a spoken one. Verbal instructions over the telephone may be misunderstood or forgotten unless jotted down at the time. A telautograph order is unmistakable—there are identical records of it at two places.

5. *The dictograph.*—A highly perfected means of intercommunication between office departments is the dictograph. At first it was used chiefly for the detection of crime. It is now a recognized office appliance. The dictograph consists of a receiving instrument in the chief executive's office, connected by wire with the corresponding instruments in other parts of the building. The executive at his desk can make connections with any of the receiving stations, issue orders to the men in those rooms and even overhear their conversation. Letters can be dictated to a stenographer in another room. The head of a prominent business concern in New York thus describes the use of the dictograph:

> One of a busy executive's greatest losses of time is thru personalities. Most of the people who speak to the president spend four minutes in "mouth talk" to every two minutes of "brain talk."
>
> High executives don't see half the men they really want to see because they can not hold them down to the business at hand.
>
> With my dictograph, I can press a key, ask a department head a question, get my answer, say "thank you" and use the information for answering my telephone, while writing

a letter or making a decision, in less time than the usual courtesies of a usual interview.

I lift no receiver, and do not even change my position at the desk. Our whole organization is connected, the system affording completeness of communication.

We don't put off so many things now that we have this system. We don't hold up something for a department head until enough has accumulated to make calling him worth while. We "do it now."

The system practically seats every other executive in the office at one's elbow, yet far enough apart that each can do his particular work best.

6. *Mechanical messenger service.*—Finally, we have mechanical messenger service.

There are two forms—the pneumatic tube and the overhead carrier, both familiar from their use in retail stores. In either case there is a central desk to which the pneumatic cylinder or the overhead basket carrier is sent and thence dispatched to its destination. The small pneumatic cylinders are suitable for carrying messages, sales slips, cash, etc. The basket carriers can transmit light articles like files. The overhead carriers can do the distributing and collecting for a central filing department, if the entire office is on one floor.

7. *Adding machines.*—Mathematical machines make up the next group of office appliances. They are designed primarily to do the arithmetical tasks which formerly proved so burdensome to clerks. The most largely used and best known of the mathematical machines is the adding machine. Compared with the human brain it has the double advantage of

greater speed and greater accuracy. There are two types of adding machines—the listing and the non-listing types. The listing machine writes down each item which goes to form the total that is calculated. The non-listing machine does not write down the individual items, but merely performs the calculation desired and gives the total, which is sufficient for the purpose of verifying a mathematical calculation already made. The listing machine is more expensive and its operation is, necessarily somewhat slower. An analysis of the requirements of any business will show which of these types of machines is the more suitable. Subtraction, multiplication and division can also be performed upon the adding machine, but in larger offices these operations are usually left to the calculating machine.

In one firm an adding machine is employed to do the following pieces of work:

Adding trial balances
Balancing accounts
Adding voucher check books
Adding daily sales
Adding and balancing daily sales analyses
Adding cash
Extending and proving bills
Figuring inventories
Totaling cost sheets
Extending, adding and proving pay-rolls.

In addition, the machine distributes the pay-roll by departments to

Total day working hours
Piece-work
Overtime earnings and allowances
Percentage of piece-work hours
Average weekly wage per hour
Average piece-work hour wage
Average wage by departments.

8. *Calculating machines.*—The so-called calculating machines subtract, multiply and divide as well as add. These operations are performed with integral numbers, fractions or decimals. Square root and cube root are also extracted. All work is visible, and unless the operator is careless, mistakes are impossible. If he is careless, the machine reports his error. These calculating machines can be used in a wide variety of ways to figure percentages and ratios, and in working out a whole mass of statistics now used in managerial control. Such a machine does wonders in banking houses where, for example, at the end of the day, twenty checks may be credited to a person, and fifteen more debited, the subtraction made and the balance given—all operations instantly and correctly performed.

When one considers the present use of adding and calculating machines, it is difficult to understand how monthly statements for customers could be prepared by unaided human addition and subtraction. Under such circumstances the present volume of banking business could not be handled without increasing the clerical force enormously.

9. *Billing and bookkeeping machines.*—A combina-

tion of the typewriter and calculating machine is the so-called billing machine, or bookkeeping machine. The writing is at all times visible. In addition to the typewriting feature this machine has an adding and subtracting register which can be applied to any column of figures listed. Billing machines are invaluable for retail stores with a large number of charge accounts that sometimes run into fifty items each, besides containing credit items for "goods returned."

10. *Loose-leaf or card bookkeeping.*—As a result of the vogue of cards or loose leaves for accounting records, the use of bookkeeping machines has been extended to the keeping of individual ledger accounts. The machines are especially useful where duplicates are required, because of the large number of carbon copies that can be made of each record. It is possible to take a ledger page, insert it in a machine, make the proper entries, replace it in the ledger—all in less time than was required to make these entries in pen and ink. However, the main value of the system lies in the automatic proof which it affords and in the elimination of duplicate operations, as in the making out of invoices and accounts. Any number of copies can be made from the one original.

The National Surety Company of New York, has described the advantage of mechanical bookkeeping in the magazine, *"100 per cent Management."*

We use electrically driven bookkeeping machines, combining the adding and typing features, which give us a loose-leaf original register of the business written, arranged

by policy expiration dates, with total figures for the computation of pro-rata premium reserve in one original book of entry.

In addition to this register, we create at the same writing, by means of carbon paper, our underwriter's index of each page on a 4 x 6 card; our expiration record on a similiar card, and a Hollerith tabulating machine card on the reverse side of which is typed in this operation a description of the bond policy.

This work was formerly done in two operations, in addition to which the work of computing the reserve was done by a force of men on standard adding machines by process of selection of policy expiration dates. Combining this work as we have, we have saved, in pay-roll, seven typists and three reserve clerks.

We have obtained an original book of entry, arranged numerically by policy numbers of which we have felt the need for several years. We give identical copies of all records to all departments interested in the risk, and thus do away with the errors occasioned by recopying the different forms.

11. *Cash register.*—The cash register can be used for office purposes, for example, to give the bank balance to date. The register can print upon each deposit slip the total amount of the deposit. It can also print, upon each check, the amount of the check drawn. Adding counters on the register can add the total of deposits during the day to the bank balance of the day before. Then, from this total, the day's bank balance can be determined by subtracting the total of the day's checks.

In the same way, the cash register can keep track of bills paid, sales, money paid on account and petty cash expenditures. The totals of these items can

be continually registered and kept so that the status of any feature of the cash can be readily ascertained.

The business of a certain publishing house is largely conducted on an instalment basis. To facilitate handling the accounts, each is given a number. When checks or remittances come in, they are usually accompanied by a letter from the customer. If the letter does not give the customer's number, a file is consulted and the number marked. Each payment is then "rung up" on the letter received from the customer, the cash register giving the amount of the remittance, the date received and the number of the account. A copy of this information is recorded on a cash strip roll which remains in the register.

The customer's letter is forwarded to the proper department for handling and the cash strip roll goes to the accounting department for credit to the customer's account. The roll is then cut into uniform strips and these strips pasted in a cash book for permanent record.

In addition to the above, the register gives a daily and monthly total of the money received. The daily total is used to check up the deposits, while the monthly total is used to check up the accounting books. The monthly total is consulted also for quick reference to the business done. The register in this case was especially constructed to meet the requirements of the office.

It will frequently pay to study the needs of your

business and have a machine built to fit those needs.

12. *Statistical machines.*—The most remarkable of all appliances in the mathematical group are the so-called statistical machines. The first made was intended for use in the Census Bureau at Washington and the tabulation and calculation of census results in their present detail would now be impossible without it. The machine has three parts which operate upon specially designed cards. One machine, operated in a manner similar to the typewriter, punches the cards in designated squares. Each square has a particular significance; a punch in one may mean a salesman, a state, or a sum of money. For each sale such a card is punched.

The punched cards are assembled and taken to the sorting machine. By an electrically controlled sorter all the cards of salesman "A" will be picked out, the sorter choosing only those which are punched in "A's" square.

The cards thus chosen are then taken to the calculator—an adding device which will give the total of "A's" sales. In making its addition, the machine is guided by the punches which represent the sum on each card.

When the analysis of sales for each salesman has been completed, all the cards can again be run thru the sorting machine, and this time sorted and totaled to indicate the month's sales by states, or by grades of product.

Montgomery, Ward and Company use such a ma-

chine to make analyses of their sales in four different ways:

(a) Territorially, or by states.

(b) By departments, or kinds of goods.

(c) By methods of shipment, express, freight or parcel post.

(d) By method of order—whether thru the catalog or otherwise.

The possibilities of analysis to which these cards lend themselves are illustrated by the use which the Census Bureau makes of them, ascertaining the number and geographical distribution of the inhabitants, their classification according to color, race, nativity, parentage, age, marital condition—and in addition, furnishing statistics which are subdivisions of these headings.

Some firms now rent the services of statistical machines to customers for temporary use.

13. *Semi-mathematical machines.*—There is another group of machines related to the mathematical group, and not deserving separate classification. For example, there is a small hand stamp for the consecutive numbering of requisitions, order-blanks, etc. There is also a check protector which indents the figures of a check in the paper, at the same time letting colored ink into the indentation, making it almost impossible to change the figures without detection. Another machine stamps the check with such words as "Not over $500." Here leeway is left for the falsifier.

An ingenious machine is the check signer, by means of which ten checks may be signed by one person at the same time. The machine works on the principle of the telautograph, already described. When the ten checks have been signed, they are dropped into trays, and ten other checks are slid under the pens. It is said that by the use of such a machine a person may sign his name twenty thousand times in a day. The machine is of particular use to high corporate officials when issuing new securities which, under the law, must be signed by a specified person.

14. *Mailing machines—the addressing machines.*— Machines connected with the preparation or opening of the mail may be noted. The most important is the addressing machine. It is used to prepare permanent lists of addresses, carried either on stencil cards or type plates. These type plates or stencils are filed in receptacles in the same manner as index cards. Out of the cabinet holding these addresses, the plates or stencils are automatically let into the machines by which envelops, postcards, bills, etc., are addressed in rapid order. When the envelops have been printed, the address plates drop back into the cabinet drawer, so that the original order of the arrangement is maintained.

Such address lists can be used by mail-order houses, newspapers, banks, collection departments, sales departments for lists of prospects, and in general by any organization or department having a great number of persons with whom it must periodically com-

municate. The machine enables any boy or girl, in a few hours' time to do the work that used to require days of a clerk's time. It can be used to fill in letters, address envelops and circular letters, head up and date statements, imprint pay forms, shipping tags, labels and the like at the rate of one thousand to three thousand per hour, which is ten to thirty times faster than the pen or typewriter. There is no possibility of error or omission. When it is worth while to employ the addressing machine it generally pays to operate it with an electric motor.

15. *Letter-openers.*—If there is a large volume of mail to be opened a letter-opener is indispensable. Even when it does not result in any great money saving, it saves time and gets the mail opened for prompt distribution. The knife can be so adjusted as to cut only one-hundredth of an inch from the top of the envelop. In the larger power machines the envelops, regardless of size, can be set in the machine, carried between two rollers and opened with great speed.

16. *Time-Stamp.*—In connection with an envelop-opener, a dating machine or stamp can be used to indicate upon the mail the day and hour when it was taken out of the envelop. The use of the time-stamp is of course not confined to the dating or opening of mail. Time-stamps can be used thruout the office for indicating the time at which bills are paid, records filed, or the time when work passes from one department to another. This latter use of the time stamp

is valuable in following up work thru the office routine, and in checking any delay in its movement.

Date perforators will stamp from six to fifty letters at a time, depending upon the size of the machine used. They can be adjusted to stamp any one of four periods during the day; that is, these perforators do not mark the hour of the day, but after perforating the date, the perforation of an extra dot signifies the letter was received the first part of the morning, two dots, the latter part of the morning, and so on.

17. *Letter folding.*—When a firm sends out a thousand or more circular letters a day, it may pay to have a folding machine to fold the letters for insertion in the envelop. Such machines, which can fold a piece of paper one, two or three times, are also suitable for folding circulars, usually received from the printer in flat form. The machine is electrically driven. Its use results in accuracy and neatness not easily attainable by hand-folding.

18. *Envelop sealer and stamper.*—It is difficult to get along without an envelop-sealing and stamping machine when the volume of daily mail is heavy.

The machine is operated electrically, moistening the gum and sealing the envelop. Stamps are affixed automatically. The machine handles from fifteen hundred to two thousand pieces an hour. The number of envelops sealed and the number of stamps used are indicated on a register.

There is another type of mailing machine which

instead of using stamps prints the postage paid on the envelop. This machine requires a Post Office Department permit and is operated in harmony with the Post Office Department's rules and regulations relating to the use of Postage Meters. It is faster than the stamp affixing machine and also speeds up the mail by eliminating the need for cancelation at the post office.

There are also separate stamping machines. Stamps purchased from the post office in rolls of one thousand each are locked into the stamp box and can not be extracted except as they are pasted on letters and registered. In this manner petty thieving of postage stamps is stopped.

19. *Time clocks.*—There is a small group of machines or appliances not so readily classified. Among them is the time clock, which is used in most factories and in some offices as well. The device consists of a clock with a time stamp, located between two racks. The rack at the left indicates the employes who are in the office; that on the right, those who are out. In each rack is a place for the card of each employe. When he enters in the morning he takes his card from the right-hand rack, stamps it and places it in the left-hand rack. When he goes out, he similarly stamps his card as he transfers it from the left to the right-hand rack. Those who are late have the time indicated in red on their cards. Each individual thus supplies his own attendance record.

In offices employing one hundred people or more

it has been found practical to employ some mechanical method of checking arrivals and departures. One time clock has a dial on which are numbers which correspond to the numbers assigned employes. A lever marked "in" and "out" is used for punching the number whenever the employe passes in or out. The records are marked with the employe's number and the time punched "in" or "out." In this way, any system of disciplining those who are habitually late is easily established.

Time clocks, however, are not generally used in offices because the concentrated office force may be more readily supervised than the more scattered employes of factories or such places of employment as shipyards. Office employes, moreover, are likely to be of a class that resents this mechanical recording of their coming and going. It is true that between them and their superiors there should exist a relationship that would produce the same degree of punctuality as that which the time clock enforces.

20. *The paper-cutting machine.*—A paper-cutting machine is profitably used in many large offices. Ordinarily the cutting charge for 500 sheets is ten cents. Since much of the paper used in the office can be cut on this machine, considerable saving is thereby effected. Usually a ream of paper may be cut at a time—depending, of course, upon the weight of the paper.

21. *The padding machine.*—In every office there is a certain quantity of discarded paper which can be

used as scratch pads if put up in convenient form. The most economical way of doing this is to use a padding machine. After the paper is sized to pad, strips of cardboard are inserted to form the backs of the pads. The press is then tightened and the sheets of paper kept together by an application of cement and cheese cloth. After the cement is allowed to dry, the pads are cut according to size wanted.

22. *The binding machine.*—For the purpose of binding together the pages of a house organ, reports, or any other literature for office use, a binding machine operated either by hand or treadle may be secured. Wire staples are fed into the machine and by means of the treadle the wire is driven thru the paper and clinched on the other side. Pads of paper of one-half inch in thickness may be fastened by this machine.

23. *The baling machine.*—Waste paper of all kinds may be turned into money by the use of a baling machine. It is about four feet square. Wire to strap the paper is first placed in the machine. After waste paper of all kinds is dumped into the box, a weight is screwed down. When the box is filled, the sides are removed and the wire fastened, thus making a bale.

REVIEW

Plan a telephone system most suitable for the office with which you are connected.

What is a telautograph?

What are some of the mathematical machines, statistical

machines and mailing machines now in use by different offices?

Do you think that the installation in your office of any of the communication or mathematical machines discussed in this chapter, other than those now in use, would be justified by the resulting increased efficiency?

CHAPTER VIII

FILING

1. *Office operations.*—The variety of office operations is so great that any attempt to enumerate them would be fruitless, and any effort to describe them in detail would be unsatisfactory. Correct office management reveals itself in a careful adjustment of many matters of detail in such a way as to secure the maximum efficiency. The needs of any particular office will, in a large measure, determine what constitutes efficiency.

The importance of detail can only be understood by a careful analysis of some of the office processes. In making a choice of those which will serve as illustrative matter, filing and inter-departmental communication have been chosen. However much offices may vary in detail, these are matters of almost universal application.

2. *Importance.*—The value of an efficient system of filing can not be stressed too strongly. In this present day of keen competition, everything must be done in the most economical and efficient manner if the organization is to hold its place and live. The concern that clings to "slipshod" methods of filing, allows correspondence and other records to lie around

in desk drawers, or in the pigeonholes of roll-top desks will pay dearly for its negligence.

Good filing is more important for the expeditious and proper transaction of business than is generally realized. It consists not merely in placing letters where they may be promptly and surely found; its larger and more valuable function is to make available the material necessary for the complete study of any problem, whether a single letter, or records of several different kinds.

Theoretically, filing is a simple matter. From a practical viewpoint, however, it is frequently anything but simple because of the quantity of material to be handled and because it is not always easy to determine just how to classify material so that it may be quickly found. For instance, it may seem wise to file a letter under the name of the correspondent. Subsequently it may develop that it would have been better filed according to the subject discussed in it.

Again, a letter may refer to two or three different subjects. To cover this, memoranda referring to the letter are filed where needed. This is called cross-reference, and will be discussed later in the chapter.

A filing department, to be efficient, must be capable of putting all information on a certain subject in the hands of the correspondent at a moment's notice. Any inaccuracy or delay may result in the loss of a contract or in the making of a contract based on guesswork due to information not being accessible.

3. *Personnel of filing department.*—The impor-

tance of a knowledge of filing principles and methods is realized when we see that a single misplaced letter may result in serious loss to the business. At the same time, we recognize how easy it is to misfile a piece of correspondence. Filing should not be an odd job, assigned to an office boy or an inexperienced clerk, but should be in the hands of people who understand its value and difficulties. It would hardly be economy to employ a cheap, inexperienced clerk and have high priced executives annoyed and delayed while the clerk flounders around trying to get the records asked for. The filing department to be of greatest service must have competent, trained clerks and suitable equipment.

4. *Equipment.*—All filing equipment should be of standard size and uniform in material and design. As we have already stated, when the files are in the same room with other office equipment, it is well for the appearance of the office to have the furnishings and the files of the same general style. The following suggestions will be of value to those purchasing filing equipment:

I—"Best quality is cheapest."
  (a) Cheap folders tear and break down—use tough, strong, heavy, manila paper.
  (b) Guides should be of heavy cardboard or pressboard. Guides with celluloid tab projections or metal tips are more expensive but will last much longer.

II—Use simple equipment—elaborate equipment is not necessary or desirable.

III—Have sufficient equipment—congested files tend to errors and loss of time.
  (a) The standard letter drawer will hold approximately 5000 letters.
  (b) Not more than 40 to 50 letters to a folder.
  (c) Not more than 10 to 20 folders behind a guide.

IV—Have filing equipment arranged conveniently.

V—There are many aids for filing which add much to the efficiency of the department:
  (a) Tub desks—10,000 cards within reach of the clerk
  (b) Single box file on wheels
  (c) Mail sorter—box or tray with guides alphabetically indexed.

5. *Centralizing of files.*—The advantage of centralizing the files in general use increases as the business grows. Centralizing them reduces the cost of operation and gives greater efficiency. Information is then available to all, whereas when there are separate files in each department, it is often difficult for one to get information from the files in another department. Moreover, it offers a means of fixing responsibility, an important matter when there are so many possibilities of loss thru divided responsibility.

The filing department should be in charge of a competent, well-trained chief clerk who is directly responsible for the department and its contents and whose duty it is to supervise and direct the other clerks.

6. *Essentials of a good filing system.*—The essentials of a good filing system are:

(a) Accessibility of records
(b) Simplicity
(c) Suitability

The prime essential of a filing system, if it is to justify its existence is that it enables anything filed to be located again with a minimum of time and effort. It makes no difference whether the filing is recent or has taken place some time ago. If the matter can not be located readily, the filing system is a failure so far as that is concerned.

A system is not necessarily a good one because it is elaborate. It should be built on the principle that it can be readily learned by the average clerk. The simpler the system, the less danger of mistakes.

A system may provide accessibility and simplicity and yet not be suitable for a given business or for the kind of material being filed. Office managers are sometimes so impressed by the working of a system in some other concern as to wish to adopt it bodily. As a rule this can not be done because a filing system should dovetail into the peculiarities of the business and this can seldom be accomplished by a transplanted system. The manufacturers of filing equipment can be of real service, however, in suggesting systems that can be adapted to the needs of the business.

7. *Systems of filing.*—There are a number of filing systems. They include the alphabetical, the numerical, the alphabetical-numerical, the decimal system, etc. While the descriptions in the following pages

are confined to correspondence files, the principles apply to card files as well as to the filing of documents, drawings, etc.

In familiarizing oneself with the important systems of filing, one should not feel obliged to pick one system to the exclusion of the other. As a matter of fact, an organization may be able to use all systems or parts of them. No one system is better than all others; that fact should be recognized. There is, however, one system best for each particular set of conditions. If many different conditions exist in the various activities of an organization, then it is conceivable that all systems may be used. It is wise to have as few systems as possible.

8. *Alphabetical system.*—The alphabetical system of filing is the simplest and most common one. It is used either singly or in conjunction with other methods of filing. It is called alphabetical because correspondence is filed by the initial letter of the writer's name or of the subject. All reference to the file is direct, without requiring a separate index.

The alphabetical order employed in the local telephone directory will be found a convenient one to follow. Guide cards are made out according to it. Whether there shall be a hundred or a thousand guide cards depends upon the type of file. Guide cards should be plentifully provided to reduce the effort of location to a minimum. The folders, with their contents indicated on the stub, are filed in alphabetical position behind their proper guide card.

The letters are ordinarily filed in the folders in chronological order—the last letter received being placed in the front of the folder.

A folder for miscellaneous correspondence is placed back of each guide and in it are filed letters from occasional correspondents. Some firms have a separate folder for each correspondent and do not consider it good filing to use miscellaneous folders, while others have separate folders only for those that have actually sent in an order, an important letter or a definite number of letters (3, 5, 7, etc., as decided upon by the particular concern). When miscellaneous folders are used a contrasting color is often employed to aid in filing.

There are those who claim that the alphabetical system is the simplest and best because of its ease of operation and expansion. It has, however, certain disadvantages. One is the possibility of placing refiled letters in the wrong folder particularly when there are many subdivisions in the alphabet.

Another disadvantage, when office space is limited and rents are high, is that room for expansion must be allowed in each drawer. The general practice is to allow one-third. Unless sufficient room is provided, there will be an overflow, that bugbear of filing systems, and it may necessitate rearrangement all along the line. It is well always to file under the name of the firm except where the correspondent is dealing with matters which do not concern it.

When a letter is filed, the filing clerk should un-

derline with red pencil the name under which the correspondence is to be filed. This helps to eliminate mistakes in refiling. The alphabetical system is used when the correspondence is of a general character or when there is not a vast correspondence involving frequent dealings with the same people. In comparing the alphabetical system with the numerical system described in the following section, it must be remembered that it is easier to locate but harder to file under the alphabetical system. This gives an advantage to the alphabetical system when the reference to the file exceeds the amount of filing to be done.

9. *Numerical filing.*—The value of the numerical system is derived from the principle that the mind works more rapidly with numbers than with letters. Guides of distinctive colors are used to indicate hundreds and additional guides at regular intervals of 10 or 20. The folders are numbered consecutively.

Each correspondent, organization or subject is given a folder numbered in the order in which the first letter or paper is received. An index card is made out at the same time upon which is noted the name and number and the card is filed alphabetically in a card index. Each letter from the same individual or on the same subject is numbered to correspond with the card and folder, so that it can be filed after use. If, however, a rightly numbered letter is placed in a wrong folder, it may be difficult, tho not im-

possible to find it. If a letter is wrongly numbered, it is likely that the search for it may be still more difficult and tedious.

The system is economical of space because each file can be used to its capacity. Eventually, however, the files become loaded up with dead matter. Again, if the folder number of what appears to be an obsolete account is given to a new house, confusion may result.

The numerical system can not be used to advantage when there is a large volume of correspondence with only a few concerns, nor when the correspondence is chiefly transient. The auxiliary card index has to be kept up to date, and is a trouble and expense. The expense may be lightened if the cards can be used for some other necessary operation of the work, such as quotations on orders, mailing list, follow-up, etc.

The problem as to where to file the communications of the occasional correspondent comes up with this system as well as with the alphabetical file and is met in several ways:

(a) Designate a series of numbers as miscellaneous folders and give several letters the same number
(b) Use a separate folder even if only one letter is received. This fills up the files but many concerns consider it better filing
(c) Some offices arrange all occasional correspondence in an alphabetical file and use the numerical arrangement for regular correspondence. This procedure impairs the unity of the files and is of doubtful value except in the hands of an experienced filing clerk.

10. *Decimal filing.*—When the main object of filing is to be able to recover correspondence of a kind, class or subject, the subject classification is used to advantage. Railroads, telephone and telegraph companies, etc., find it, on the whole, a good one. The "Dewey Decimal System," originated by Melvil Dewey, furnishes a standard.

In Mr. Dewey's words, "the system was designed to serve as a method that would index books and pamphlets on the shelves, the cards of a catalog, clippings and notes of scrapbooks and index rerums, reference to all these items, and indeed any literary material in any form, as readily as an ordinary index guides to the proper page of a bound book."

As applied in a modified form to correspondence filing, the whole field covered by the correspondence of any company would be divided into ten main classes, and these numbered 0 to 9. Each main class would be similarly separated into ten divisions, divisions sub-divided into ten sections, and so on.

If, for instance, the material to be filed relates to a variety of makes of automobiles and their parts, each car would have a certain number. Supposing that the number of a certain car were 371, then the cylinder would be say, 371.7, the outer casing 371.72 while the piston might be 371.724, and so on. The same principle may be applied to the filing of any subject and give satisfactory results if the system is properly planned. The indexing should be done only by an experienced person.

Valuable as it is for most purposes, the decimal system has been found impracticable when the subject-matter of the file can not be confined to ten main divisions. The Library of Congress, for example, uses a system of alphabetical numeration because the alphabet affords an opportunity to make 26 different classifications of a subject or any of its divisions or sections where the decimal system, of course, stops at ten. Under this system the automobile piston might be "CFA.XKL." It is not an easy system for ordinary clerks to handle.

11. *Alphabetical-numerical filing system.*—This system is a combination of the straight alphabetical system with auxiliary numbers. The simplicity of the alphabetical system is combined with the accuracy and rapidity of refiling of the numerical system. Errors that are likely to arise in refiling in the plain alphabetical system and the inconvenience and loss of time due to the necessity of a separate card index in the numerical system are done away with. Letters are filed and found alphabetically and refiled numerically.

The alphabet is divided as minutely as may be necessary and guides are made out as in the straight alphabet system. The guides are then numbered consecutively. Thus, if there are 100 divisions of the alphabet, then the guides are numbered 1 to 100; if 500 divisions, then from 1 to 500, etc. Each folder is numbered to correspond with the guide back of which the folder is filed and each letter in the folder should

be numbered to correspond. When a letter is filed the name under which it is to be filed should be underlined in red and the number written in red very distinctly. For example—if a letter were received from Bethlehem Steel Company, the filing clerk would find the Ba-f guide, which in this particular case might be numbered 8. She would then see whether there was a folder for Bethlehem Steel Company, and if there was, she would mark the letter with a number 8 beside the underlined name Bethlehem Steel Company, and place the letter in the folder. If there were no folder, then she would either write on the tab of a new folder the name and number "Bethlehem Steel Co.—8" or would place the letter in the miscellaneous folder according to the filing policy of the particular concern. If miscellaneous folders are used, one folder is allowed for each guide and is generally of a contrasting color.

In refiling, the clerk merely has to look over the guides until she comes to the number that corresponds with the number of the folder to be refiled. This is a very rapid method of refiling, and any mistake of placing the folder in the wrong place would be readily seen on account of the break in the sequence of numbers. The letters or folders are filed by name and checked by number; they are refiled by number and checked by name. The system practically eliminates errors in filing. By means of a table all letters can be expeditiously classified and numbered before being placed in the files.

12. *Mnemonic filing system.*—A plan approximately the same as the decimal filing system or the Library of Congress method, uses instead of numbers or arbitrary letters, letters which indicate by sound or suggest as far as possible the name of the material to be filed. It is more flexible in some respects than the decimal classification because the major classifications are not limited to ten. Thus "A" may represent the advertising department, "C" the credit department and so on. Advertising in newspapers will be represented by the symbol AN while AM represents magazine advertising, AMA will indicate advertisements in the American Magazine, and further letters can be used to indicate the type or size of the advertisement. The main objection to this system is that in the finer sub-divisions the mnemonic symbol is apt to become cumbersome and liable to be incorrectly written or read.

13. *Geographical filing.*—The advantage of geographical filing is that all the correspondence of one territory is kept together in the files, a plan which may prove useful in a sales department, for instance, where it is advantageous to know what business relations the concern has with customers in any given territory. It is advisable to use a postal classification or similar list as a basis for filing in determining, for instance, whether all correspondence relating to New York and its suburbs should be filed under one heading, or part under Brooklyn, another part under the

Bronx, and so forth. Such points should be carefully considered in planning the system.

There is, of course, some trouble in a geographical file if a correspondent changes his address and the folder is not changed accordingly. The duplication of town names may lead to trouble. With care both kinds of errors can be prevented. It is well to have a ruling that letters from firms and their branches shall be entered under the location of the head office.

The geographical arrangement of the file may best follow the boundaries of the different sales territories, according to the nature of the business. Correspondence under each heading may be arranged alphabetically.

An alphabetical card index of the names of concerns is used in connection with the geographical system and for cross reference. If the wording both on the tabs of the folders and on the cards of the index is written in the order in which the correspondence is to be filed, it will facilitate filing—for example Pennsylvania, Philadelphia, Lit Brothers.

14. *Chronological filing.*—In this system all letters are filed in the order of the date on which they are received, or else according to the *attention* date indicated by the contents. The system is valuable in some lines of business where the transaction has to be performed at a fixed time, as in periodical publishing houses. Guides marking the months and the days of the week or of the month are used to separate

the material which need not have a separate folder.

15. *Perforation filing.*—A new idea, likely to prove especially useful in some cases, is "Perforation Filing." This is a mechanical method whereby certain pieces of information may be readily and accurately segregated by means of perforations of a certain shape on cards.

Cards are so designed that any fact may be indicated by the mere punching of a slot. When all the cards are slotted, they are placed in a drawer and rods are run thru them. The drawer is then inverted and only those cards which are slotted drop down to the limit of the slot while the others are held in place. The drawer is then righted and the cards thus segregated can be counted at leisure. Thus the hand-picking of lists is eliminated.

In a unit of 600 cards perhaps no more than ten may be slotted alike. It would be a tedious affair to examine the whole box by hand, whereas by the use of this device their location may be instantly determined. For instance, if one wishes to know how many correspondents have a certain financial rating, a given slot indicates the facts, and the number in that group can be determined by inverting the drawer. This system of filing may be used for prospects whose financial standing, profession or location is a matter of interest. "Perforation" files may be made to disclose any isolated fact or any required combination of facts.

16. *Filing methods.*—Unquestionably the most ef-

ficient method of filing is the vertical one. Vertical filing permits materials to be filed conveniently and with greater economy of space than is possible under other methods.

Correspondence should be arranged in a folder so that the most recent material is in front, thus facilitating reference.

Material to be filed should first be arranged so that the folders may be taken in order. Under a numerical system, for example, the sheets should be arranged in numerical order—under an alphabetical system, in alphabetical order. A standard sorting box will be found convenient for this. It is a container provided with guide cards permitting the vertical assorting of material alphabetically or numerically. For sorting folders a cabinet with rows of pigeonholes will prove a time saver. Before a letter is placed in a folder the names and numbers should be compared to avoid misfiling. No letter from another house should be filed unless it is, for example, crossed thru with a line, initialed and dated to indicate that it has been answered. A rubber date stamp with the correspondent's initials on it will often prove convenient. This is to avoid filing unanswered letters.

Cross-references are an essential safeguard of every system. When they are efficiently made, any paper may be located instantly, no matter how many points its contents may cover, because each point will have a cross-reference. If, in a letter from Brown, reference is made to one from Jones, the fact should be

noted in Jones' folder, otherwise the latter's correspondence will not disclose all the information that may be needed in dealing with his case. The cross-reference should preferably be on paper of a special color.

The confusion caused by correspondence falling out of folders may be prevented by fastening papers to the folder with special clips.

Folders should be returned to the file promptly after use. It will be found advisable to hold the filing department responsible for their collection and distribution.

17. *Charge system.*—A filing system is weakened when papers or folders are abstracted without any record of the action. The condition may be corrected by the institution of the charge system. This operates either by keeping a list of each item removed or else by replacing the matter abstracted with a memorandum. When only a few persons use the files, a sheet of paper of special color may be used bearing the names of persons likely to require papers so that the proper name may be checked before the paper is placed in the files. Or it may be a requisition form also of colored paper. A carbon copy should be made of each requisition, one copy to be retained by the charge clerk and the other copy placed in the files where the material was taken out. The requisition should give the name or number of the material required, the person's name, and the date. In some concerns, "out" guides are used—

they are guides of distinctive color with the word "Out" in large letters on the tab so that it is at once apparent that something has been removed. When "out" guides are used the record of the removal is sometimes written on the "out" guide itself while in other cases the requisition slip is placed in an envelop or projecting insert on the guide itself.

In many concerns a writing table is supplied for the convenience of those wishing to consult material for only a few minutes. It is well to encourage this habit as it makes the material always available to any one wishing to use it.

Material to be filed should be collected at regular intervals. If borrowed material is kept out for any length of time, the charge clerk should notify the borrower, and in some instances the charge can be renewed. The person who borrows should be responsible for the return of the material. The duty of the charge clerk is to remind the borrower but not to be actually responsible for the return. Certain rules similar to those used by the public libraries can be successfully applied in the charge system:

(a) Renewal allowed
(b) Material borrowed by one person can not be transferred to another, but must be returned to the charge clerk
(c) Definite length of time allowed for borrowed material
(d) The borrower is responsible not only for the return of the material, but for the condition of the material
(e) Certain records can only be used for reference and can not be taken from the filing department.

It should be an absolute rule of all filing departments that no one shall have access to the files except the file clerks and that nothing shall be borrowed except by written request, even tho the material is only desired for a few moments. The borrower may take it for a few moments and finding he needs it longer may take it to his desk leaving no record in the filing department.

18. *Follow-up.*—To keep track of correspondence needing attention in the future, it is well to use a "follow-up" or "tickler" system. If letters are placed in an extra, chronological file, they may not be found by any one else who looks for them in the regular file. It is better to keep all such letters in the regular file and make out cards for the "tickler."

A card will indicate the name, the file number, the person who wants the correspondence and the date upon which it is wanted. The file clerk attends to these matters. Usually the call-out date is conspicuously indicated on the correspondence itself by the person who wants the information. The tickler cards are filed chronologically. In some cases the auxiliary alphabetical card index, which is required by most filing systems is used with metal indicators. Across the top of the index cards is printed the dates of the month from 1 to 31. The metal indicators are 12 different colors, one for each month and the correct color is put on the proper date. Thus, if red stood for January and you wanted a card brought out on January 24, a red indicator would be put on

the number 24 on the card required. As the same numbers or dates of the month on all cards are directly back of one another, it makes a very simple system. Every morning, the file clerk takes out the day's cards and notifies the person concerned. Suppose that a prospective customer signified his desire to see a certain machine on a certain day next month. The filing clerk is instructed accordingly. On the appointed date, the card comes to light and the salesman is reminded of the circumstances.

Follow-up is indispensable in the collection of delinquent accounts and in securing the prompt shipment of goods. It may be used in the office for reminding the different members of the staff of meetings, appointments and duties to be performed at specified times.

19. *Transferring material from files.*—Since the value of correspondence decreases with age and at the same time its bulk increases, the transfer of old files becomes an occasional necessity. The importance of systematizing the process is apparent when, for instance, it is considered that a lawsuit may necessitate a search for old letters outside the active files. It is then that the transfer-file method is put to the test.

The simplest way to handle the problem is to transfer the entire files intact at certain periods. The method, however, is likely to cause inconvenience if frequent reference has to be made to matter recently transferred. Another method is to retain two years' correspondence in the active files, making a division

between each year's correspondence, as apportioning an upper drawer to the current year and a lower drawer to the year past. The older file may then be transferred whenever reference to it has ceased, and the plan may be repeated each succeeding year. If, in addition, a special color is used for the folders of each year, there is not much danger of misfiling current material. Still another method is to take out all material over six months old. With this method, most firms have the transfer cases large enough to hold a year's correspondence so that when the correspondence of the last six months of the year is transferred, it is put with the correspondence of the first half of the year. While it is a good rule to make the transfer periodic, in actual practice it is usually best to do it when no other pressing work is on hand. The transfer period affords an opportunity to eliminate all useless matter. The transfer of individual folders that have become bulky is sometimes resorted to, but the temptation to follow this practice should be avoided. It is advisable, however, to keep a record in the active files of all transferred material.

20. *The record room.*—Every record room should have a detailed plan showing the arrangement of all files so that they may be consulted with convenience when necessary. A card index may also be used to indicate where each class of material is to be found. The record room should be well ventilated, as otherwise papers are sure to deteriorate rapidly from damp-

ness. The room should be well lighted so as to facilitate filing and search. Unless the room is fireproof, it should not be used for valuable papers. Well-painted steel shelves, of movable size, divided into sections, should be put up as in a library, each shelf, if possible, of the approximate capacity of a year's papers. The shelves must be identifiable by plain numbers.

The same necessity exists for centralizing responsibility in the care and use of the record room, as in the management of the active files. No one should have access to it except by permission of the person in charge.

21. *Inspection of files.*—No matter how careful the file clerks may be or how thoro a system has been worked out, errors in filing are bound to occur. Some check against them should be provided. The best protection is to have a person check the file constantly. The clerk goes thru each drawer of correspondence and sees that the folders are arranged in proper order and that their contents are correct and properly arranged. In this way, the loss of correspondence is prevented and the work of filers is made more accurate because they know that it is being checked.

REVIEW

What should be the preliminary training of a filing clerk?

Under what circumstances is a departmental file more economical than a centralized file?

Name and describe several kinds of filing systems.

What method of filing would you use in an editorial office? In a mail order office?

How would you file a letter written on company stationery but signed by an individual?

CHAPTER IX

INTER-DEPARTMENTAL COMMUNICATIONS

1. *Vital need of communication.*—Since there is a considerable subdivision of function in a large organization the need for regular and frequent communication between the members is apparent. Orders must be transmitted to subordinates, who must confirm receipt of them and report their execution. Subordinates and officials must frequently consult one another. Men in one room find it necessary to refer to files, books or catalogs in another room. Stenographers are constantly needing new supplies. There is a constant inflow of mail to the departments of the business, and a corresponding outflow of answered mail. The facilitation and control of inter-departmental communications is therefore a matter of importance.

Communication facilities in the office must provide for the transmission of (a) written messages; (b) material, such as typewriting paper, pencils, etc., (c) correspondence files, catalogs, library books; (d) business documents, such as orders and requisitions which in their normal course must pass thru many hands and (e) oral messages.

2. *Unproductive time.*—Without efficient means of communication, workers will waste time moving

about the office to consult with one another, to examine records or correspondence or to get supplies. Efficient inter-departmental communications offset the disadvantages of spacial separation.

In many offices the working force is constantly beset by interruptions which lower the efficiency of the work. The time needed to perform specific types of office work is governed not only by the actual volume of work but by the intervals between the performance of the various steps into which the work is divided. If those intervals can be cut down, there will be a large saving in time and consequent increase in output

3. *Reducing waste motion.*—Good facilities for inter-communication in an office benefit every member of the force. It has an important effect upon the discipline of the workers. Efficient discipline can not be maintained if employes needlessly leave their desks and spend their time in inter-departmental visits.

Business is normally conducted under pressure. Therefore, whatever hinders the rapid flow of work thru an office will prove a hindrance to the management. It can not be expected that the executive himself should neglect more important functions to attend to routine work. Yet close attention to routine is demanded of him if there is a faulty or congested circulation of work, information, messages or documents thru the office. He has to find the point of congestion and remove it. A good system would render frequent interference unnecessary.

4. *Elements of communication.*—The proper handling of inter-departmental communications comprises four elements:—(a) logical layout; (b) messenger service; (c) telephone service; (d) written communications.

If provision is made for properly meeting these elements, inter-departmental communication will be carried on with a minimum of waste effort.

5. *Layout.*—If individuals and departments that work together are located near each other the problem of communication is considerably reduced. Workers should be so placed that the work passes from one to the other in the shortest time and without the necessity of doubling back. Files should, whenever possible be located near the desk of those who are expected to use them most frequently.

One company, as a result of a scientific study of the possibilities of dispatching, reduced its principal unit of work, which formerly required an average of three days, to a standard schedule of three hours.

6. *Messenger system.*—So far as possible, all communication other than by mechanical or electrical means should be by messengers. Good messengers are not born. Understanding and appreciation of the work must be developed in them before they can be expected to render good service. With the proper supervision and planning, however, a department of boys or girls can be developed for the systematic carrying of messages and material from one department to another that will reduce to a minimum the

need for higher-priced employes leaving their desks.

7. *Regular schedule.*—It is essential to a satisfactory service that trips for the collection and distribution of material and communication among various departments in the office be both frequent and regular. Just how often the trips are made depends, of course, upon the size and requirements of the organization. In one large manufacturing business where a great deal of ground must be covered and many letters as well as small packages be transferred from one department to another, a messenger starts every ten minutes. The messengers in a large banking institution make the rounds every fifteen minutes. For institutions where the need for prompt exchange of information between departments is not so urgent, half-hourly and even hourly intervals may do. In the Larkin Company office at Buffalo the messenger boys are provided with roller skates. The plan has not only materially reduced the time required to handle messages, but also the boys have taken considerably more interest in their work.

8. *Collection baskets.*—To facilitate the collection and distribution of inter-departmental mail messages, it will be found helpful to supply the messengers with collection baskets on rubber-tired wheels. The baskets, as a rule, consist of three compartments, one for incoming papers, another for outgoing papers, and the third for correspondence to be returned to the files.

At the central distributing station for depart-

mental messages a pigeonhole rack facilitates distribution of the collected matter.

9. *Checking collections.*—To prevent delays and errors due to carelessness of messengers, and to enable the person in charge of the messenger service to trace delays there should be a checking system. Where this is in use, mail and messages for distribution are placed by each worker in his or her desk basket marked "Outgoing," and are collected by the messenger boy when he distributes mail or messages to an adjoining basket or tray marked "Incoming." The baskets or receptacles are emptied at regular intervals in the routine. In or on each receptacle is a card showing the time of the last delivery. Each card must be marked with the time of collection as, for example, "This tray was emptied at 8:30 A. M." Each messenger has a certain number of trays or baskets on his route and is held responsible for all collections and deliveries.

10. *Definite instructions.*—Messengers should be instructed in all the details of work for which they are responsible, and the preliminary instruction may well be followed by regular meetings with the messengers to stimulate their interest and discuss the details of service.

A concern that has been very successful in building up a high quality of messenger service puts all beginners thru a two weeks' course of training. First they are told, in language they can easily understand, all about the product of the organization. Next they

are taught in a general way the purpose and work of each department and its location. Then they are personally conducted thru the plant so they may visualize the various departments. Following this, they are taught the names and titles of all the men of importance in the business and given a short biography in each case, so that they may know and respect them.

The messengers are then carefully trained in all the details of the work they are to do. A printed manual of instructions is given them which they are required to read over every few months. Meetings are held with the messengers and the head of the department twice a week.

The result of all this is that the messengers realize the importance and value of the service they are rendering, and tend to improve as long as they remain in the department.

11. *Mechanical messengers.*—The overhead carrier system is another method of inter-departmental communication that has proved its value under certain conditions. The Phœnix Mutual Life Insurance Company of Hartford, for example, in an article in *System* says:

> During the process of recent changes in one of our larger departments, many mechanical office devices were investigated for the purpose of speeding up the process of issuing policies. A thoro analysis of the old method of routing applications thru many hands for the purpose of getting all necessary information, led to the adoption of a mechanical messenger system.
>
> The apparatus is an adaptation of the carrier system

familiar in many department stores, and it is used for carrying policies and other papers from one desk to another by an overhead route.

The system consists of six lines, two of which afford direct communication between sections of the departments, and four of which radiate from a central desk where the papers are automatically transmitted to their destination by the information clerk.

The baskets for the system were specially constructed, being made of light alloy metal, with hinged doors at the back and front, so that complete letter files may be inserted without folding.

Besides serving to carry all inter-departmental messages, these carriers are used for sending Dictaphone records between various stations and a central transcribing station.

A test recently made on the six lines for a period of one week shows 1830 trips (both ways) were being made by all the carriers. Multiplying the number of trips made by the length of line in each case gave the result that nearly 13 miles were covered by the carriers in a week.

The mechanical messenger service has proved not only a saving in time and labor, but has eliminated much of the confusion which inevitably arises from having a number of persons involved in handling and distributing documents. The necessity for clerks leaving their desks, and the nuisance of frequent interruptions have been done away with, resulting in a greater concentration on the work of the clerks, and a material lessening of the time required for the issuance of a policy.

12. *Telephone service.*—It would be difficult to over-estimate the importance of efficient telephone service in the proper handling of inter-departmental communications. Prompt and courteous service means much in expediting work and in maintaining the proper relations between departments. It pays

to select telephone operators with a good deal more care than is ordinarily shown, and to spend time in training them in the kind of service desired.

13. *Telephone usage.*—On inter-departmental and outside telephone service, the standards of usage required by the telephone company of its employes should be adopted. Telephone operators handling incoming calls should answer with the name of the company, and in handling inter-departmental calls should say "office operator." An employe in acknowledging calls should not say "Hello!" but should give his name: "Mr. Smith speaking."

If some time is required to make a telephone connection, the employe calling should not be required to hold the wire during the wait; he should be called when the connection is made.

Sufficient telephone extensions should be provided to avoid delay in handling the necessary business of any department or individual.

14. *Handling the incoming mail.*—Once out of the postman's hands the letters and other mail matter which he delivers become in effect internal communication which must be handled with proper care if the office is to operate at maximum efficiency. There is, perhaps, no branch of office detail more important than the opening, sorting and distribution of the incoming mail. An hour gained in the morning may add several hours to the business day. Office work usually moves along according to a fixed schedule, and if the mail misses the beginning of the schedule,

it must usually lie over until a later hour. The chief consideration is that it shall be placed in the hands of the proper persons at the earliest moment.

In many businesses a high grade clerk examines all incoming mail and marks the letters for the departments to which they are to be sent. The departments are sometimes designated by number. Some letters go successively to various departments, the mail reader indicating the order which such a letter is to follow. If it is necessary that the letter make the rounds within a certain time, the mail reader lists the departments to which it is to go, and indicates the time within which the letter must be returned. All mail except such as is marked "personal" is opened by the mail reader. When a letter must be referred to several departments—especially if it is an important letter—it is sometimes copied and a copy sent to each department interested.

The general mail-distributing clerk or the departmental mail-distributing clerk should see that there is noted on every letter, or attached to it, all information and every record which the correspondent needs in answering it.

15. *Routing slip.*—Much of the efficiency of a business depends on the speed and accuracy with which the mail is routed to the various departments. The first essential of an adequate system is the establishing of a central point at which all incoming mail may be first received. The preparation of a routing slip is the next step to insure the prompt dispatch of all

material. A routing slip is not of course, needed in an organization where mail is handled by a few individuals, but only when it is necessary to refer it to various individuals and departments. The routing slip prevents delays and insures the even and prompt passing of letters from one point to another. Where space is provided for a time-stamp it is a simple matter to check up the departments that hold mail unnecessarily.

A routing slip in use by one organization is printed below:

CORRESPONDENCE ROUTING SLIP

	Check Dep't. Here	Time Rec'd.	Time Dispatched
Alphabetical Index (for file number)			
Filing Department (for folder)			
Change of Address Clerk			
Collection Department (for collection data)			
Correspondence Department			
Stenographic Department			

Figure 2

With the aid of such a slip there can be no question as to who shall handle the mail, and no shirking

of responsibility, since the letter must be delivered to the department indicated on the routing slip.

To be effective the routing slip should not be too large. It should be pasted to the correspondence so that it will not be easily detached. Some concerns, feeling that there is a possibility of the routing slip becoming lost, use a rubber stamp on the paper itself to show its routing. The rubber stamp is, however, not always practical since in some cases there is not sufficient space on incoming letters to use a stamp, especially on those written by hand on note paper.

16. *Clocking system.*—In an organization of any size there is always the problem of delays in the handling of mail. Mail delays are serious, no matter what the type of concern. Many times a tardy reply has lost both business and good-will for an organization.

Delays are more prevalent, perhaps, in concerns where the mail must pass thru a number of hands. A little study as to the causes of these delays will bring to light some startling facts. Poor system, lack of cooperation, insufficient help and poor quality of help are a few of the causes that an investigation will reveal.

The first step in finding a cure for this "evil" is to devise a method of locating the points where the clogs occur.

After making a careful study of its mail delays, one concern adopted the following plan. It installed

in each department thru which its mail passed an electric time stamp bearing the name of the department, the date, and the hour and minute. These time clocks are centrally controlled by a master clock. As mail is received in the department each piece is stamped with this information. After the department has completed its handling of it, the mail is again time-stamped to show when it left the department, after which it is dispatched to the next point in the routine. For example, in this organization, mail is stamped first at the point where it is received; again in the filing department where it is sent to collect previous correspondence; then in the department responsible for dictating a reply; then in the stenographic department; and then at the point where the letter is finally o. k.'d.

At a centralized point, the file copies of completed mail are inspected by a clerk assigned to the work of checking up the time-stamp notations to determine where delays are occurring. Cases of delay are taken up with the department at fault, an investigation as to the cause for them determined and steps taken to eliminate them.

17. *Putting it in writing.*—It is recognized as an important rule of modern business practice that all instructions must be in writing, and this applies also to information sent from one division to another. Oral messages waste time, often cause annoying interruptions and are frequently misunderstood or forgotten.

Forms used for recording various kinds of office

communications offer a good field for standardization. Memorandum forms usually have the initials of the sender and the person addressed, as well as the subject-matter and the date of sending recorded at the top of the blank in spaces indicated for that purpose.

18. *Saving writing.*—A somewhat different form is used by the Federal Reserve Bank of New York City. Under the heading "Deliver to" appear the names of various officials and departments, the person addressed being indicated by a check mark. Under a second heading, "Instructions," are a number of brief instructions of a typical character, one or more of which are to be checked and at the foot of the blank is a space for the name of the sender. One edge of the blank is gummed to facilitate attaching it to correspondence.

The Federal Reserve Bank form illustrates the growing tendency to reduce writing to a minimum and substitute the checking of printed paragraphs whenever possible. In the case of a document that must be inspected by a number of men, a gummed label, like the one just described, can be attached, and each man can put a checkmark opposite his name when he has completed his inspection, thus releasing the document to be forwarded to the next name on the list.

19. *Signal services.*—For transmitting signals or calls thruout the office, use is made of buzzers, gongs and visible call systems. The telephone system can

be used for a certain type of call. Separate rings on the telephone can be given for each of three or four officials in the office. If one of these persons is wanted and is not at his desk, the operator sounds his ring on all telephones. If he does not hear the ring himself, somebody who is near the telephone will hear it and inform him.

A visible call system, using plain or colored lamps, transmits any simple code of signals by means of a combination of flashes. Such signals have the advantages of silence, but they are not so certain to attract attention as the audible signals, the buzzer and the gong. The visible signals are not effective in announcing time for starting and stopping the work, or, particularly, in announcing fire or fire drill. Therefore, even where a visible signal system is installed, it is generally supplemented with an audible system.

REVIEW QUESTIONS

1. What are the elements involved in a good system of inter-departmental communication?
2. What are the functions of the office messengers?
3. Plan a system of inter-departmental communication for your office.
4. Is it advisable to maintain a close check on the progress of mail thru the office? Why?

CHAPTER X

OFFICE MANUALS

1. *Need of manuals.*—The answers of the average employe to a few questions regarding the "why" and "wherefore" of the work he is doing would reveal how astonishingly ignorant many of them are of fundamental matters outside the scope of their immediate duties. Every employe down to the office boy should be made to feel that he is a part of the company so that he will take pride and interest in his work and in his company. Such feeling and performance can only result in the utmost benefit to both employe and company. This progressive cooperation can not be attained unless every employe definitely understands what his or her duties are, his relation to his department and the relation of his department to the organization as a whole. It is now generally recognized, by up-to-date concerns, as good practice in any line of business to make a record of the company's general policies, rules, regulations, organization, procedure and standards and to present this record to the employes in the form of manuals. A manual is fundamentally a record setting forth and requiring obedience to accepted standards.

2. *Value of manuals.*—The manuals of an organiza-

tion hold the same relation to the organization that specifications do to high class machinery. Some of the values of manuals are:

I. Place responsibility; tell each employe
   (a) To whom he is responsible
   (b) What work he is responsible for
   (c) Who is responsible to him
II. Establish precedent
III. Insure proper sequence of work
   (a) Operations in logical and economical order
   (b) Nothing omitted
   (c) Duplication eliminated
IV. Improves relationship between departments. The various departments then,
   (a) Know the work of the other departments
   (b) Appreciate the problems of the other departments
   (c) Are shown where they can help one another.
V. Need for improvement is seen that otherwise would not be noticed
   (a) Faults of method
      1—two or more operations combined to reduce cost
      2—unnecessary operations are brought to light
      3—unnecessary forms are eliminated
      4—faulty routing of the work is made apparent
   (b) Waste in material
   (c) Waste in labor
VI. Do away with oral instruction and its many disadvantages, such as:
   (a) Incompleteness
   (b) Inaccuracy
   (c) Misunderstanding
   (d) Inattention
   (e) "Passing the buck"

The manuals act as a basis for instruction for new

employes and as a reminder to old employes. Verbal instruction is often forgotten, the manuals are always available.

VII. Do away with a mass of bulletin literature, which
(a) Becomes obsolete
(b) Is contradictory
(c) Becomes lost or put away without being filed

VIII. Do away with snap judgment. Every change made in the manual has been carefully thought out, thus preventing hasty decisions based upon insufficient knowledge.

3. *Introduction of manuals.*—It is most essential that the true value of manuals be appreciated by the supervisors and employes of a concern before the manuals are introduced; otherwise, hearty cooperation will not be secured. The average man will want to know of what use it will be to put in print what is already known. This can be readily answered by citing the plight of a prominent concern when one of their chief executives suddenly died. He had been a most valuable man, one of peerless judgment and boundless energy and the usual answer to everything, had always been "Ask Mr.——." When he was gone the company began to realize the condition they were in. No one seemed to have been responsible for anything except Mr. —— and Mr. —— had carried his office in his head. There were no records; he had known, but he had not put it in writing.

Then there is the department head who fears that if principles and methods are put in writing he will not have to give his personal attention to them and

therefore his value to the company will be lessened. He should be made to realize that the manual will be a decided help to him as it answers a multitude of routine questions, thereby giving him time to work on more difficult problems.

One important point to be brought out is that the manual prevents shirking of duty, makes the work of the plodder show its value and brings to light the pretender, as was demonstrated in a large concern when they introduced manuals. When compiling the information so as to segregate the duties of the various men, it was found that one high salaried official, who always had the appearance of being very busy, and who was always going around deploring the idleness of the younger generation, was doing practically nothing himself. The only work they could find that he actually did was to sort the mail after his secretary had opened the letters, and to supervise the stenographic department and employes' lunch room, both of which however had most efficient heads and therefore made the work of supervision practically nil.

It is always unwise to make a radical change or institute a new method in an arbitrary manner. A little time and effort spent in paving the way often makes clear sailing that otherwise would be rough going. As for example, it had been decided to instal time clocks in two large offices of a corporation. The manager of one talked to his employes before the clocks were installed and convinced them that time

clocks were a good thing for the employe as well as for the company. The other manager simply installed the time clocks and issued an order that beginning the following morning every employe from the office boy to the technical experts must "punch the clock." Immediately there was indignation with remarks that "If that is the way they feel, I will be ready to leave at 5 sharp, no more finishing a job for me." In this case it was taken as a personal grievance by every one while in the other office with a fore-sighted manager, it was merely considered an efficient method.

The above is merely to show that the introduction of manuals must not be forced. Every broad-minded employe will cooperate if the value of manuals is made clear to him, but will act as a cog in the wheel if he does not understand and considers the manual as being mere red tape from the man "higher up."

4. *Preparation of manuals.*—All manuals of a concern should be written along the same general lines so as to be comparable. A few of the more important suggestions for the writing of manuals follow:

I. Use the questionnaire method to get information; then discuss the answers with several representative workers in each line of work so as to be sure you have the true nature and extent of the work.

II. Have the department manual compiled by a committee from the department affected, as they will derive much benefit from the actual work of compilation.

III. Use the loose-leaf form so that any changes or additions can be made without disturbing the entire manual.
IV. Use a separate sheet or sheets for each subject.
V. Have the manual written in paragraph form, using:
  (a) Simple concise wording
  (b) Short sentences and to the point
VI. Write in the third person
VII. Use official titles, no names; names may change but titles remain fairly constant.
VIII. Index all subjects.
IX. Date all sheets.

5. *Kinds of manuals.*—There are three distinct types of manuals namely:

(a) Policy manuals, which contain the general information regarding the company as a whole.
(b) Procedure manuals, which apply only to departments and serve as the specifications for the scope of the department, its functions and duties.
(c) Performance manuals, which give explicit instructions in regard to the method of performing an operation.

6. *Policy manual.*—The policy manual gives a sketch of the history, activities, policies and general rules of the company with a view of helping the employe to cooperate more intelligently with the company. It usually begins with a statement of the ideals which govern the conduct of the company. Every concern that sells a commodity or a service

appeals to the public on the ground that the public will derive advantage from the purchase. It is right that this ideal should be communicated to the office force. Every concern wishes its employes to feel that they are doing more than earning their wages—that they are engaged in giving the public useful service.

Next, the office manual usually describes the product or service that is sold, the raw materials from which the product is made, processes of manufacture, method of distribution, markets; if service is sold, its character, scope, etc. It is valuable for members of the office force to feel that they are parts of a worth-while institution and to be informed of and to realize the nature and scope of the work in which they participate.

The functions of the different departments of the office should be described so that each person may realize his or her place in the whole.

Finally, the manual should contain full "Office Information and Instructions" embodying the main rules and regulations which govern attendance and conduct, as well as information regarding the office house organ, social activities and clubs, study classes, and emergency instructions for cases of injury or for vacating the buildings in case of fire.

7. *Marshall Field manual.*—The purpose of the office manual is admirably expressed in the opening paragraph of the office manual of Marshall Field and Company of Chicago:

INTRODUCTION

To do the right thing, at the right time, in the right way; to do some things better than they were ever done before; to eliminate errors; to know both sides of a question; to be courteous; to be an example; to work for the love of the work; to anticipate requirements; to develop resources; to recognize no impediment; to master circumstances; to act from reason rather than rule; to be satisfied with nothing short of perfection.

The important part of the rule is the spirit of it. This is gained by understanding the wisdom and necessity of it, and not by mere obedience because it is a rule. No rule seems hard when we see that it is wise—worked out from experience.

The object of these rules is not to abridge the rights of any one, but to point out the plan which we believe to be the wise one to follow. The traveler making his way over unaccustomed roads is grateful for the guiding post which tells him the way to his destination—he never complains that the sign at the crossing tells him to go the up-hill way, for he is glad the sign is there, and obeys it usually because he knows he is on the right road.

We wish you to see, back of these rules, our earnest desire to conduct this great institution in the most harmonious manner; to give you the benefit of long experience; to save you the retracing of unguided steps; to enable you to grow in the knowledge of sound business principles and thus to become a credit to yourself and the house.

MARSHALL FIELD & COMPANY

8. *Policy manual outlined.*—The following outline will give a clear picture of just what a policy manual may embrace:

I. Inspirational preface
II. The company and its work
    (a) History

(b) Product
(c) General policies

III. Personnel
(a) Board of Directors
(b) Executive officers
(c) Department heads and assistants
(d) Organization chart

IV. Functions of department (sketched briefly)

V. Office Information
(a) Office hours
(b) Holidays
(c) Vacations
(d) Accommodations
1. Rest rooms
2. Locker rooms
3. Personal use of phone
4. Loan of umbrellas
(e) Helpful information
1. How to procure supplies
2. Payment of salaries
3. How to secure petty cash
4. How to secure personal postage

VI. Office instructions
(a) Attendance
(b) Conduct
(c) Appearance
(d) Attitude
(e) Reports

VII. Mutual interest work
(a) Suggestion systems
(b) Study classes
(c) Library
(d) Departmental meetings
(e) House organs
(f) Clubs

VIII. Health precautions
(a) Attending physician
(b) Nurse

(c) Health hints
IX. Fire protection
(a) Fire signals
(b) Fire brigade
(c) General instructions

9. *Main rules of a typical manual.*—The rules and regulations embodied in the office manual will probably differ to a certain extent in any two concerns that might be chosen. The following excerpt from the "Rules and Custom Book" of one organization will serve as a guide in the preparation of such a manual:

(a) Office Hours—The Office Hours are: Weekdays from 9 A.M. to 12:30 P. M.; from 1:30 to 3:20, and from 3:30 to 5. Saturdays, from 9 to 12.

A gong is rung to indicate the time when work is to begin and when it is to stop. This gong is sounded promptly at 9:00 and 12:30 o'clock; then at 1:30 to resume work for the afternoon; and at 3:20 and 3:30 o'clock for the beginning and end of the rest period; and the last gong at 5 to announce that the work for the day may be stopped.

Three minutes before the starting gongs at 9, 1:30, and 3:30, a warning signal is sounded in order to give employes ample time to reach their desks before the starting signal. The warning signal consists of two strokes of the gong in rapid succession.

The offices are open from 7:30 A. M. to 6 P. M. No employe is permitted to remain in the office after 6 P. M. without the permission of his department head.

(b) Rest period—For the relief of employes from the so-called afternoon "fag," the company has es-

tablished a rest period of ten minutes every weekday afternoon from 3:20 to 3:30 o'clock. This causes a break in the afternoon's work and makes it easier and pleasanter to do more efficient work the rest of the day.

Employes are requested not to congregate in the inside or outside halls during Rest Period or Lunch Hour. However, they may meet in the General Office or in any of the Clerical Offices during these periods. It makes a poor impression upon visitors to have the halls and reception rooms crowded with employes.

(c) Overtime—Every effort is made to guard against the necessity of any one having to work overtime. However, when work is so heavy that this becomes necessary, every employe asked to work overtime is expected to do so. The pay for overtime will be at the usual salary rate for the number of hours put in. When it is necessary, due to the length of time required for overtime work, for employes to go out to supper 75 cents will be allowed for it. This money will be distributed on the day the overtime work is to be done.

No clerk, however, may work overtime without the knowledge and permission of his or her department head.

(d) Holidays—The holidays observed by the company are:

New Year's Day	January 1
Washington's Birthday	February 22
Decoration Day	May 30
Independence Day	July 4
Labor Day	
Columbus Day	October 12
Election Day	
Thanksgiving Day	
Christmas Day	December 25

(e) Be punctual—No employe who is constantly tardy can get ahead in this company. Tardiness gives the impression of carelessness and unreliability. Employes who are not reliable can not expect to be intrusted with responsible positions.

(f) Absence—Any employe detained at home unexpectedly, on account of illness or other emergency, should immediately notify the department head or Chief Clerk in charge of his or her department, either by telephone or messenger, reporting cause of absence and, if possible, date of expected return.

Employes who are absent from the office for some cause other than their personal illness will not be paid for the time they are away. The company will pay employes for reasonable periods of absences due to personal illness.

(g) Work quietly—Loud talking across desks or between departments should be avoided. It distracts others from their work.

(h) Do not interrupt—When you see a person busy, either with dictation or in consultation, don't interrupt him. Instead of standing beside his desk and distracting him from his work, wait for a more opportune time or send him a memorandum.

(i) Don't disturb papers—Don't touch the papers on another person's desk when he isn't there. You wouldn't care to have others go thru the papers on your desk in your absence.

(j) Be dignified—Employes should be dignified in their behavior. Do not skip, jump or run in the office or hallways. It makes a bad impression on visitors and other employes, and reflects upon you personally.

(k) Smoking—All male employes below the rank of Chief Clerks are forbidden to smoke at any time in any of the offices or halls of the company.

(l) Personal appearance—a tasteful, neat, business-like personal appearance gives the impression of

carefulness and self-pride. Many a person has lost the opportunity of a good position because of a poor impression made by gaudy attire or careless appearance.

(m) Desk appearance—From time to time the Chief Clerk of each department is instructed to make an inspection of his or her department to be sure that all desks are kept in a clean and orderly condition; that desks and table drawers are not kept littered with papers, and that the office is neatly kept.

(n) Office appearance—The first impression gained by visitors is usually a lasting one, therefore, all employes should see to it that the office is always kept in a neat and orderly condition.

(o) Study your department—You should never be thoroly satisfied with the results your department is showing, but should be constantly thinking about your department, studying the routine, and planning better ways of putting thru work.

(p) It is only in this way that you can prove to those above you that you can shoulder bigger responsibilities.

(q) Think—When possible, decide general matters of detail pertaining to your work yourself, without taking up the time of the department head. If you know how a particular matter should be handled, do it. If in doubt, then consult the person directly above you.

(r) Keep information confidential—Keep in the strictest confidence anything that you may learn of the affairs of the company. Violation of this fundamental rule may be the means of determining the unfitness of employes who may otherwise be capable of filling positions of trust. Confidential affairs of one department should not be communicated to another department, nor should information about the business be given over the phone promiscuously.

(s) Profit by your Mistakes—A mistake is a sign of progress up or down the scale. When one is pointed out to you, do not display indifference, make excuses, or try to lay the blame on others when the fault is yours. Mistakes are shown you simply to help you to avoid them in the future.

(t) Do not be a Clock Watcher—The employe who takes an interest in the company and is looking for appreciation of his or her work can not be a clock watcher.

When you come to your work in the morning or at noon, go directly to your desk and prepare for your day's work. Do not stop until 12:30 at noon and 5 in the evening, with the exception of the ten-minute rest period mentioned.

Don't wait until nine o'clock to come into the office and do not leave your work or make preparation to leave it until the gong strikes the luncheon, recess and closing hours.

10. *Featuring accommodation.*—The policy book may well feature accommodations provided for employes. The following excerpt from the manual mentioned above will give an idea of what may be included under this heading:

(a) Lounging Room—A large, comfortably furnished Lounging Room for the use of the girls has been provided under the supervision of the Company Nurse. Here the girls may eat their lunches, read magazines which are provided, dance or just rest.

The room is equipped with a piano and Vocalion, together with an assortment of records, including the latest dance "hits."

(b) Locker Room—On each floor, rooms equipped with steel lockers are provided for the use of the employes.

(c) Procuring of lunches—For the convenience of those who prefer to eat their lunches in the office, the company has arranged the following plan:
A clerk has been assigned to purchase and deliver lunches daily for these people. Lunch slips are passed around in the morning so that the employes may order what they wish. Later the slips and money for lunches are collected by the clerk. All lunches are distributed before 12:30.

(d) Personal Use of the Telephone—Outside of office hours, the company does not desire to restrict its employes unduly in the necessary personal use of the telephone. It should be understood, however, that the abuse of this privilege, or the indulgence in frivolous or unnecessary conversation over the telephone, will not be permitted. The telephone may not be used by the clerical employes for receiving incoming or outgoing calls during office hours, without the permission of their Chief Clerk.

(e) Loan of Umbrellas—The company has on hand a supply of ladies' and gentlemen's umbrellas which it lends to employes when a storm comes up unexpectedly during the day. To secure an umbrella a request must be made at the Stock Department either in person or thru the Office Service Department. Each employe will be required to sign a receipt for the umbrella borrowed. A receipt will be returned upon the return of the umbrella to the Stock Department. An employe borrowing an umbrella is expected to return it on the following day, unless it continues raining, when the umbrella may be kept out until the weather clears. A fine of ten cents will be imposed for each day that an umbrella is overdue. The money so collected is used to purchase additional umbrellas.

(f) Postage for Personal Use—Employes may purchase what postage they desire for personal use from the Cashier.

(g) Fiction Library—A number of books of fiction have been added to the Library for circulation among the employes. Employes are privileged to select any books that they desire, the time allowed for the reading being two weeks. However, at the end of that time they can be renewed on permission of the Librarians. Every one in the company is entitled to draw out one book of fiction at a time and as many non-fiction books as he wishes.

11. *Procedure manual.*—The procedure manual is strictly a departmental record of its official duties and approved practices and is one of the most important elements of organization work. It serves the purpose of training new employes to carry on any part of the department's work as well as of continually reminding both new and old employes that they are a part of the organization; that the way they handle their own work reflects on the department as a whole and as a result a spirit of cooperation is constantly fostered.

A procedure manual should explain in detail:—

(a) The object of the manual and its use.
(b) The name and location of the department, its scope and functions.
(c) All rules, regulations and policies, etc., applicable to the department itself and not covered by the Policy manual.
(d) The opportunities of service of the department with other departments and the company as a whole.
(e) The specific duties of the head of the department and all other positions in the department.

(f) The routine work covering ordinary and special procedures which are well defined.
(g) The use of forms, records, reports, files, etc., and whenever possible, give cuts illustrating their use.

The advertising department of the Institute, for example, has in its manual eight chapters covering two hundred pages of typewritten matter. This advertising department also handles the mail-order work of the company. The following table of contents of this manual may prove enlightening as to the extent of detail covered in a departmental manual:

ADVERTISING DEPARTMENT MANUAL

CHAPTER I. INTRODUCTION

A. Functions
B. Personnel
C. Relation to other Departments

CHAPTER II. SECURING LEADS

A. Directly by Advertising
    1. Advertising Routine
        (a) Copy
        (b) Selection of Media
        (c) Payment of Bills
        (d) Tracing Results
    2. Leads from Advertising
B. Indirectly thru other sources.

CHAPTER III. SECURING ORDERS BY MAIL

A. Advertising Department Routine
B. Division of Leads
    1. Sales
    2. Straight Mail
C. Carding of Leads
D. Operation of Follow-up System

1. Symbol System Used
2. Regular Follow-up
3. Canadian Follow-up
4. Foreign Follow-up
5. Special Letters

E. Replies
F. Routine Upon Receipt of Order
G. Notification of Order to Salesmen

CHAPTER IV. SECURING UNIVERSITY ORDERS

A. Policy in Regard to University Orders
B. Follow-up System Used
1. Plan
2. Complimentary Material Sent
3. Special Letters
C. University Files and Catalogs
D. Routine on Receipt of Orders
E. University Card File
F. Book-Store Agreement.

CHAPTER V. SECURING PUBLICITY

A. Newspaper Publicity
B. Convention Publicity

CHAPTER VI. RELATION TO OTHER DEPARTMENTS

A. Sales Department
1. Selling Equipment
2. Ad Books
B. Printing Department
C. Purchasing Department

CHAPTER VII. ADVERTISING RECORDS, REPORTS AND CHARTS

A. Advertising Records and Schedules
1. Daily Returns from Advertising
2. Returns from Advertising Mediums
3. Returns from Advertising Copy

4. Record of Work Done by Members of the Department
5. Returns from Follow-up and Dictated Letters
6. Daily Record of Leads
7. Daily Record of Mail Orders
8. Advertising Estimate and Insertion Schedule
9. Copy Schedule by Months
10. Copy Schedule by Magazines

B. Advertising Reports
1. Daily Report Giving Analysis of Advertising Leads
2. Weekly Reports of Returns from Advertising
3. Monthly Reports of Departmental Constructive Work
4. Monthly Departmental Division of Time and Report of Leads Received (for Accounting Department)
5. Weekly Summary of lateness in Clerical Department
6. Monthly Report of returns of Follow-up.

CHAPTER VIII. ADVERTISING FILES

A. Contents of Files
1. Advertising Files
2. Clubs
3. General
4. Improvement Folders
5. Publicity
6. Samples
7. Indorsement Letters
8. Magazines
9. Follow-up Records.

12. *Performance manual.*—The performance manual deals with a given piece of work and the accepted method of performance. Due to the very na-

ture of office work, the information contained in such a manual is frequently included in the procedure manual as indicated by the example of the "Advertising Department Manual." The performance manual itself is usually in the form of instruction sheets or cards and given only to the individual affected. It sets forth specifically the operations, equipment, standard time, etc., necessary to perform a given piece of work. In some cases, the exact methods and motions to be used in performing the operations and the time required for each motion are given. This type of manual at the present time is not very generally used.

13. *Keeping manuals up to date.*—There should be some elasticity thruout the manual and individual initiative should not be stifled but encouraged by suitable recognition for suggestions. For every change that is made in the routine in the department, written instruction should be filed in a definite place so that when the time comes to revise the departmental manual, all memoranda for changes will be on hand.

When a detail is changed the sheet should be taken out and a new sheet, properly dated, inserted in its place. In this way the manual is kept constantly up to date. A copy of all obsolete sheets should be retained in a file for that purpose.

As a rule, it is best to place the responsibility for keeping the manual up to date on one person. It is his duty, then, to see that changes are properly recorded in all the copies used.

14. *Custody of manuals.*—It is usually unnecessary to have a separate copy of the manual for each employe in the department. The most satisfactory plan provides for one copy of the manual to be in the possession of the chief of the department, one copy in the library of the company, if there is a library, and two or three copies for the use of the clerks in the department; these several copies, however, to be in the custody of the chief clerk.

The library, incidentally, should have a complete file of all the departmental manuals of the organization.

REVIEW

What is the value of manuals?

How would you introduce manuals into a concern?

State the method you would use in preparing manuals and a few rules for guidance.

What is the purpose of a policy manual?

What should be contained in a policy manual?

How would you insure knowledge of the rules of the house on the part of employes?

What should be contained in a procedure or departmental manual?

Outline a good system for keeping all manuals up to date.

CHAPTER XI

WORK REPORTS AND THEIR USE

1. *Need for work reports.*—Just as soon as an organization grows to a point where it is no longer possible for the manager personally to supervise and control the operations of those under his jurisdiction, the need arises for establishing work reports. As a matter of fact, even in a very small organization certain reports are essential to proper management. But the need for a more or less extensive report system arises from the fact that, even tho the manager in an organization of any size should not and can not exercise personal control over every operation, he must know that these operations are proceeding satisfactorily. Work reports, serve too, in presenting to the manager, facts instead of guesswork. As soon as operations become at all complicated it is difficult, if not impossible, to form fair conclusions purely from observation. There is always the temptation to base one's conclusions upon the most recent observations, which may not reflect average conditions.

In addition, work reports serve to bring to light automatically conditions that require remedying or that indicate increased efficiency. Without work reports, a long time might elapse before these conditions were realized.

2. *Types of work reports.*—There are various types of work reports and the need for them depends upon the particular conditions existing in the organization. Under certain conditions all the work reports described in this chapter are necessary. Suffice it to say at this point that if a report is really helpful to the management and if its cost of preparation is not out of proportion to the value obtained from it, the use of the report is justified. Work reports concern themselves with quantity and quality of production. They classify themselves into reports on individual production, and departmental production. Their preparation may be daily, weekly, monthly, quarterly, semi-annually or yearly, depending upon their use.

3. *Quantity production reports.*—By quantity production reports is meant such reports as record the quantity of any unit produced in a certain period of time. For instance, the production report of a transcribing department might show the number of letters typed or the number of lines typed by the department over a period of a week. If one week's report is compared with that of another week the comparison shows whether more work was produced or whether there has been a falling off. Comparing the reports of a number of weeks will indicate what the average output should be and will naturally suggest investigation when the output falls appreciably below the average. As a still further basis of comparison, and in order to allow for variations because

of the fact that the number of working hours is not always standard, the production report might show the average output per hour.

4. *Quality reports.*—Quality reports are not so readily obtainable as quantity reports. However, wherever it is possible to gather quality figures that mean anything, these reports are a valuable check against the ever-present tendency to sacrifice quality for the sake of speed.

In a transcribing department, for instance, it is possible to determine the number and kind of errors made by the typists. Percentages can be gathered on the basis of the number of pages returned for corrections during certain periods, and these percentages when compared show whether there is an improvement or not in the quality of the work done. The classifying of the errors under such headings as spelling, punctuation, grammatical and careless errors, indicate along what lines the typists need to be developed.

5. *Principles underlying the preparation of reports.*—In the first place, there must be a definite purpose in mind governing the installation of any report. Then this report must be so devised that it really tells the story. Obviously the report must be accurate. Finally the report must be so devised that its operation is simple and that those who contribute to its preparation clearly understand the part they are expected to play.

There is no report system that can be operated

successfully in all organizations. Every concern has certain conditions that are peculiar to it and the report system must be fitted in to those peculiarities. There is a real danger in adopting without a proper test the report systems of other concerns. The larger the office, the larger, also, as a rule, are the number of reports required, since personal supervision becomes more difficult. There is, however, a curious fascination in installing and elaborating "systems."

Before instituting any new report the manager should consider what information it will probably bring and just what use will be made of it. Furthermore, he must decide whether the information obtained will be worth the time spent in making out and interpreting the report.

6. *Definite purpose.*—The purpose of any report should be clearly defined before it is installed. It takes time to keep even the simplest report and unless this time is profitably spent the report is not justified. Furthermore, if the purpose of the report is kept clearly in mind there will be less difficulty in framing it to meet the needs for which it is intended.

In this connection it is well to realize that certain types of reports, while they may not be of vital importance to the management, are justified because of their moral effect. For instance, the work of certain clerks may not be of great importance and consequently there may be a temptation to feel it is not worth while having them make reports. But if these

clerks realize that their work is not being watched carefully, they will probably do no more than a minimum amount of work. If they are required to render reports, however, they are led to believe that their work is watched from day to day and all that is necessary to confirm this impression is to run over the reports occasionally so that any tendency toward unsatisfactory work is checked up.

7. *Does the report tell the story?*—If the report is so framed that it can be interpreted only with considerable difficulty then it does not really tell the story. Reports should be so devised that only a minimum effort is required to interpret them. Unless this is done there is a constant tendency to put off using them with the result that their value as an aid in managing is lost.

Work reports which really "tell the story" should be readily subject to comparison. Only by comparison is it possible to understand clearly just what the report does show.

8. *Accuracy.*—Unless the report is accurate it is valueless. Every step, therefore, should be taken to avoid opening the way for inaccuracies. In devising a report provision should be made for checking from time to time the accuracy of the information presented. For instance, a departmental report should be based upon individual reports so that the figures presented in the departmental report can be verified by checking over the individual reports. The indi-

vidual reports should be so devised that "stuffing" or intentional inaccuracies are readily discernible.

9. *Simplicity.*—Reports should be as simple as it is possible to make them. Elaborate reports are hard to prepare and difficult to interpret. Furthermore, elaborate reports are not readily explainable to those who are entrusted with the preparation of them. As a result of the lack of intelligent cooperation, the chance for error is appreciably increased.

10. *Daily reports.*—Daily reports are the basis for the preparation of all other reports. For this reason their preparation is exceedingly important. The extent of daily reports depends, as has been already pointed out, on the needs of the management.

If the nature of the work is such that it is possible to centralize the preparation of daily reports in the hands of one or more individuals, the results are usually more satisfactory. For instance, in a transcribing department it is entirely practical to have all of the letters pass thru the hands of one clerk who measures the lines in each letter and credits the typists individually for the number of lines typed. At the close of the day these figures are totaled up to show the number of lines typed by each girl, and the total number of lines typed by the department.

In a department where a clerk is handling a variety of work it is generally impossible to centralize the preparation of reports. In such cases the individual must keep his own reports and the best method of do-

FILING DEPARTMENT DAILY REPORT

..... 19.....

	No. pieces completed	Time
Index		
Assorting correspondence		
Assorting cards		
Numbers on mail		
Numbers on list		
Unclassified mail		
Total cards looked up.....		
Index cards filed.....		
Checking files		
Attorney Files		
Geographical files		
Verifying addresses		
Specials (Request for folders).....		
Specials (At Index)		
Mail Order mail		
Stamping mail		
Miscellaneous		
Reports		

Figure 4

ing this is to have him keep a running record of the way in which time is spent. The back of an individual report sheet provides space for entering the work as it is handled. For instance, if a clerk assorts 1000 papers from 9:00 to 10:30 she would enter this fact in the columns provided for the purpose. Then, if she files 600 pieces from 10:30 to 12:30 she would enter this in the same way. At the close of the day on the front of the report sheet she

would summarize in the spaces provided how she had spent her day. The accuracy of such a report can be readily checked by casually looking it over some time during the day to see if it is really being kept correctly. Any tendency to "pad" can be discovered by checking out variations in the quantity of similar types of work handled in similar periods.

The departmental daily report which follows is simply a combination of all the individual reports submitted by the members of the department. From the standpoint of the office manager the departmental report is the important thing. Ordinarily, the daily departmental report is not studied by the office manager so much from the standpoint of production as from the standpoint of uncompleted work, for the day is too short a period to indicate tendencies. But the daily report gives the office manager a chance to watch daily any items that are particularly important or in which he may be particularly interested. It also furnishes an accurate basis for the preparation of weekly and monthly reports.

It will pay a large organization to have a summary daily report covering a few essential items in each department. If this report gives the figures for the two previous months to date it will be helpful in showing tendencies. An exhibit of such a report is shown on page 168.

11. *Weekly reports.*—Weekly reports like daily reports may reflect the output of individuals, or of departments. A week furnishes a good basis for mak-

THE ANALYSIS

The General Office Report System, of which this form is a part, is an important factor in the proper management of the office. In order that the report may be absolutely accurate please keep below a running record of just how you spend your time.

At the close of the day enter on the reverse side the summaries under the classifications indicated.

Time (From—to)	Description of work	Quantity	Remarks

(Mimeographed Office Form)

Figure 5.

ing comparisons and is a short enough period to enable the office manager to keep in close touch with

what is going on. Comparisons over a period of six or eight weeks furnish a splendid guide for the management of individuals and departments.

12. *Monthly reports.*—In order to get a clear conception of whether work is increasing or decreasing and in order to get a still clearer picture of conditions, monthly reports are a valuable addition to the report system. They may report the same items as those shown in the weekly reports or they may be confined to the more vital items. In studying monthly reports it is important to make proper allowances for holidays and for variations in the lengths of months.

The value of the monthly reports is enhanced, if in addition to the current month's output, is shown the increase or decrease in production over the previous month, the increasing total for the year, to date, and the increase or decrease over the previous year.

13. *Use of reports.*—A proper system of reports enables the office manager to determine the efficiency of operations, to put his finger on weak spots, to measure tendencies and to gain a basis for constructive decisions.

14. *Work reports—a measure of efficiency of operations.*—The wide-awake business executive of today is not satisfied with optimistic statements from his assistants that "everything is moving along nicely." Instead he is constantly striving to know "What are the facts?"

A proper system of reports furnishes "the facts" in the operation of departments. If a new machine is

GENERAL OFFICE DAILY SUMMARY FOR.....19.....

	Current Day	Month to date	Last month	2 months ago
General Information:				
Collections				
Orders				
Total mail				
Number of remittances				
Collection Department:				
Remittances entered				
Notations made				
Follow-up sent (total)				
First bills				
Reminders				
Form letters				
Cards filed				
Filing Department:				
Index numbers				
Folders dispatched				
Correspondence filed				
Folders filed				
Changes of Address				
Cards looked up				
Order Department:				
Orders typed				
Transcribing Department:				
Total lines typed (Transcribing)				
Total pieces checked				
Total pieces ret. for correction				
Printing Department:				
Multigraph lines composed				
Multigraph pages reproduced				
Multicolor lines composed				
Multicolor pages reproduced				
Press lines composed				
Press pages reproduced				
Mailing Department:				
Total outgoing mail				
Shipping Department:				
Tracer letters written				
Total shipments made				
Personnel data:				
Total avoidable errors (pre. week)				
Lateness (times)				
Absence (days)				
Total employes (prev. Saturday				
Total salary charge (prev. Saturday				
Total overtime (prev. Saturday)				
Number of working days				

introduced it shows him the extent of the saving effected. If a new plan is introduced to increase the output of individuals he is able to measure to what extent the plan is successful.

15. *Work reports—an indication of weak spots.*—The daily departmental work reports should indicate the exact amount of material left over at the close of the previous day. This information indicates what departments need help and also may serve to indicate that there is a condition calling for a remedy.

Adequate work reports will instantly bring to light the failure to get capacity production from any equipment. Theoretically the transfer of an employe from one type of work to another may be entirely satisfactory. Work reports will prove whether or not the employe is really qualified to perform the new work. It has already been said that one of the most valuable features of a good system of work reports lies in the fact that it serves as an indication of conditions that need remedying.

16. *Work reports—a measure of tendencies.*—Unless the office manager knows definitely to what extent the incoming work handled under his jurisdiction is increasing or decreasing, he is not in a position to eliminate successfully any clogging that may result from increasing work or to reduce expenses due to decreasing work. It may be possible to tell by inspection whether work is increasing or decreasing, but without a proper system of reports there is no way of gauging whether the increase or decrease is merely

a temporary fluctuation, or whether it is a definite movement.

17. *Work reports—a basis for decisions.*—A proper system of reports furnishes a splendid basis for constructive decisions. For instance, the exact time when it pays to instal office machinery is determined by the volume of work of a certain class to be done each day or week. For example, it will be profitable to fold papers by hand until there is a sufficient quantity of this work to make it more profitable to invest in a folding machine. At this point the cost of the machine will be repaid by the time saved. If there are no figures obtainable the desirability of installing a machine of this kind may not be realized, and even tho it is realized, without the reports it may be difficult to secure approval for its purchase.

The interpretation of office reports frequently leads to redistributions of the personnel or to additions being made in the force. Ordinarily, for instance, stenographers type their own envelops and make their own inclosures. As the work increases, however, it may be clear from the reports that it would be more profitable to centralize the work of typing envelops and making inclosures in the hands of one or two girls whose salaries are considerably less than those of the stenographers.

18. *Statistical department.*—In some large offices a special statistical department is maintained for the purpose of converting office reports into statements that show tendencies, unit costs and other facts for

the guidance of the management in determining the policies of the concern. In one office for instance, daily reports are made out by each employe and presented to the chief clerk of his department who compiles weekly departmental reports for the office manager. The latter prepares monthly summary reports for the statistical department which, in turn, issues monthly reports, further summarized and elaborated, for the information and guidance of the directors.

The statistical department is charged with the responsibility of compiling all records, other than those of a purely financial nature, relating to the operation of the business.

19. *Monthly information report.*—Department heads ought to cooperate intelligently in the management of their departments. Realizing this, some organizations have requested their statistical or accounting departments to prepare and send out a monthly "Information Report."

This report tells the amount of orders taken, the amount of orders filled, the production in essential items, the amount of money collected, etc., so that the department head has a good basis for judging the trend of the business and the part that his department is playing.

REVIEW

What is meant by the following terms: quantity reports, quality reports, time reports and comparative reports?

Many executives place too much emphasis upon reports.

What should determine the number and kind of reports that can be used to advantage?

What reports would you, as office manager, require from your transcribing department?

What are the features of a good report?

CHAPTER XII

THE WORKER'S COMPENSATION

1. *The forms of compensation.*—In a broad sense the compensation of the worker consists of the sum of the advantages which he obtains as a result of his activity. Many advantages are of a somewhat intangible character, but they are none the less important in determining the choice of an occupation, or in inducing the employe to remain in the position which he has taken. Some of these advantages are inherent in the nature of the occupation and it would carry us too far into detail to discuss them here. Others consist of comforts, conveniences, and opportunities for the employe which are broadly designated under the term welfare work, and these are discussed in another chapter. The present chapter is devoted to the financial compensation of the worker, whether it be in the weekly pay envelop or in the monthly check, or in money payments, which are subsidiary to these and to some extent, at least, grow out of them.

2. *Salary and other payments.*—In considering the compensation of employes, it is not to be forgotten that what counts with the worker is the regular weekly, semi-monthly or monthly payments, as the case may be. Permanent contentment can only be obtained when he feels that he is currently receiving a

fair and just salary for the work currently performed. This has an important bearing on determining the proportion which may judiciously be observed between the regular payments and any other payments which may be made for any reason whatsoever. If the latter are considerable in amount, they may awaken in the mind of the recipient the idea that they are, in large part, wages whose payment has been withheld and deferred by the employer. The judicious management will avoid giving opportunity for such a conclusion. Nothing creates greater discontent than the feeling that the employer is unjustly withholding what is due the worker.

3. *Piece-work.*—So well-nigh universal in office work is the payment of salary on a weekly or a monthly basis that the piece-work system might, it would seem, go without mention in this connection. Piece-work payments have been used successfully in circular mailing work, fill-in typing, copy work and the like. But in very few instances has the introduction of straight piece-work payment for office work been practicable. Generally speaking, the work of office employes is too varied to permit the introduction of a payment plan which presupposes that the worker will be engaged constantly on the same type of work and will repeat over and over again the same process.

An instance in which piece-work payments were applied successfully was in the elaboration of the census of the United States in 1910 and in 1920. One of the important operations in the tabulation of

the population is the transfer of the records from the population schedules by means of a punching machine to cards especially prepared for this purpose. Here the work of the operator consists of identical units constantly repeated. Operators of these machines were paid at the outset like other government employes by the month, but as soon as they became proficient in the use of them they were paid at the rate of a certain sum per hundred cards. The system proved entirely satisfactory to those who had the skill and the strength to make a large output. There were not lacking those who felt that the system had weak points, in that the piece-rate was so low as to put an unreasonable strain upon the worker who wished to obtain a proper reward for the time spent in the work, and that the quality of the work suffered by the inevitable speeding up which resulted from this method of payment.

But if the piece-rate finds little use in office work as the exclusive form of payment, this does not mean that its underlying principle is wholly overlooked. On the contrary, its indirect influence on compensation for office workers is constantly increasing. Its indirect influence finds its expression in establishing normal tasks; accomplishment beyond the normal tasks may be rewarded by special payments, and where proper work records prevail it will always be taken into consideration in questions of promotion.

4. *Salary problems.*—With the hiring of the new employe the salary problems of the office manager

have just begun. In making the initial rate he has not a wide margin of latitude. He should be governed by the general conditions in the labor market. Indeed, he can never wholly escape from the influences of these outside forces. They affect subsequent wage increases and, in some instances decreases.

Aside from these general problems, each worker offers a problem with which the office manager must from time to time grapple. Salary increases with or without promotion in rank call for attention. Old-fashioned office control, still widely prevalent, consists only in supervision, and is marked by an absence of definite work records. The head of the office has a general responsibility to see that the employe keeps at work, and that the work done is commensurate with the compensation. If a question of promotion or of a salary increase arises the decision is based on the general considerations which form the employer's estimate of merit. Such a plan often leads in the minds of the workers to the suspicion of favoritism and it is doubtful whether any system of management, however skilfully devised, will entirely root out such suspicion. By standardizing procedure and work, much can be done to mitigate this source of discontent.

5. *Salary determined by the type of service.*— Generally speaking, the first thing that determines the salary paid is the type of service rendered. It would scarcely be necessary to mention anything so obvious if there were a general recognition of the need

of distinctly defining the types of office work. Because this is not recognized and because functions frequently overlap much discontent arises.

The first requisite of a satisfactory salary system for an office is job analysis and classification. It is quite important that a study of this kind be as thoro as possible and the results compiled in chart or manual form for ready reference. In classifying the job, kindred occupations should be listed. Then a detailed description of the job in question, together with the qualifications necessary to successfully handle the work. The minimum educational requirements should also be given. With this as a guide an office manager could readily group the employes according to their essential occupation.

The second step in building up a satisfactory salary system is the fixing of definite salary limits for each class of work. If reasonable limits appear to the manager to give too large a spread it is notice to him that the classification is not sufficiently detailed. With such a definite salary schedule well understood among the employes the words transfer and promotion acquire a definite meaning. Obviously in such a case they represent changes from one type of employment to another.

To allow employes who draw widely different salaries to work side by side, or in different departments at closely similar work, is wrong in principle and vicious in practice.

6. *Salary variations dependent on service.*—In determining the wages of employes of equal rank a factor which often plays a prominent part is the length of service. Other things being equal the employe who has been long in a given service, who is thoroly familiar with it, is capable of rendering a greater service than one who is comparatively new to the work and who lacks experience. Employes generally recognize the justice of salary distinctions in such cases. There is some danger that employers will overlook the qualifying clause "all other things being equal," and there is a practical certainty that employes will do so.

As a principle in fixing salaries, length of service is a useful guide only when it is kept within narrow limits, in other words when there is a distinct and well understood classification of jobs. Then it may be an effective measure, provided there is proper supervision which keeps all workers up to a reasonable service, to distinguish between employes of equal rank.

The application of the principle of classification, modified by considerations of seniority within each class, is shown in the following salary schedule of an insurance company in effect some time ago:

Class E—Boys:

$540 for the first year, $600 for the second year, and $660 for the third year, provided these respective increases are merited. Advances in compensation are automatic up to and including the third year.

Class D—Junior Clerks, Men and Women:

$720 for the first year, $780 for the second year, $840 for the third year, and $900 for the fourth year, provided these respective increases are merited. Advances in compensation are automatic up to and including the fourth year.

Class C—Senior Clerks, Men and Women:

Minimum Salary $1020 with any advancements fixed by the Salary Committee, in no case to exceed $1500 per annum. Advances in compensation in this class are on recommendation only.

Class B—Special Clerks, Men and Women:

Minimum salaries $1500 per annum with various maximum rates fixed by the Salary Committee, in no case to exceed $2500 per annum. The advances in this class are on recommendation only.

Class A—Technical and Supervisory Clerks, Men and Women:

Compensation is in excess of $2500 per annum with the minimum and maximum salaries fixed by the Salary Committee. Advances in compensation in this class are made on recommendation only.

7. *Salary variation dependent on work performed.* —The same careful analysis of office work which is being used to determine a classification of employments is bringing to light the possibility of establishing standard performances for each type of work. The condition upon which standard tasks can be set is the uniformity of the operation involved. Elements which disturb the regular routine and flow of work can very frequently be removed by assign-

ing them to another worker. In most offices the same typists write the letter and prepare the envelop. If the letters are short the typist has many envelops to prepare and this may interfere with accomplishing the task assigned. To avoid this result the preparation of the envelop may be made a separate operation performed by a clerk who does this work exclusively.

Typing, perhaps, of all clerical work lends itself most readily to the establishment of standard tasks. One concern measures by lines and fixes 900 lines of $5\frac{1}{4}$ inches in length as a seven hour day's task. The Willys-Overland Company has a standard of 6000 square inches per week of 44 hours. Four square inches is allowed for name, address and salutation on each letter, and two square inches for addressing the envelop. In setting standard tasks care must be taken to maintain quality as well as to secure quantity. This usually takes the form of deductions for mistakes.

When standard tasks are thus established, it is right and fitting to make a special recognition of work which exceeds the standard. There are several forms of wage payments used by various organizations and it would be interesting to make a study of them for the purpose of adapting them to one's own organization. There seems to be a disposition to consider that an extremely nice adjustment of the extra payment to the extra work performed smacks too much of factory methods and the common practice is

to make one or two gradations of extra pay which are sometimes designated as prizes. By whatever name they may be known they introduce to some extent the principle of varying the compensation of employes of equal rank in accordance with the work performed.

This principle is of wider application than many office managers are willing to admit. They grant readily that it can in some instances be applied to typing but can see no further utility in it. This attitude may in some cases be justified, but more frequently it springs from inertia. They are unwilling to take the time and trouble necessary to study the clerical work in detail and to seek means of reducing it to definite standards.

8. *Extra payments.*—When there is no effort made to measure work specifically there is sometimes an attempt to gauge the efficiency of the employe by more general indications. In this case what might, for want of a better term, be designated as office habits are carefully noted and recorded. This concerns such things as attendance, tardiness, visiting in office hours and the like. In general it may be true that employes who have no bad office habits do more work than those who are less amenable to the necessary office discipline. But there seems to be an incongruity in paying for a person's time and then making an extra payment because you got what you paid for.

If a system of extra payments based wholly upon attention to duty does not seem well founded, it

does not mean that these things are not important. They are of the highest importance and it is very feasible to take cognizance of them, in providing opportunity for promotion or salary increases.

9. *Gratuities.*—Gratuities based on salaries are entirely different things from extra payments based on work, tho to both of them the term bonus is frequently applied. Strictly speaking a bonus is a payment beyond what is formally due. When the salary system provides a specific payment over and above the stated salary, this payment must be regarded as a part of the employment contract, even tho its exact amount is not determinable in advance. If it is earned by special effort it can not be withheld without breach of good faith.

The bonus on the other hand is a pure gratuity usually made once a year, generally at the Christmas season. It is commonly a percentage of the salary paid during the previous year, usually with a maximum amount. Generally only those who have been in the employ of the company for the entire year participate in the distribution. The designation of the bonus as a Christmas gift implies that it is no part of the regular payment. It may be a substantial addition to income in concerns where the bonus has become a confirmed habit with the management, but it remains a habit of the employer and never becomes a right of the employe.

Sometimes a nicer adjustment of the amount of the bonus to the merit of the individual is attempted. In

such cases there is what might be called a standard bonus to which, for various causes, additions may be made. There is a beginning of such an idea when the bonus is made applicable only to those employes who have been in the service of the company for a certain period of time. It may be extended to those who have been six months with the company or perhaps a year or sometimes indeed it may be confined to those who have been two or more years in the company's service. A further amplification of this idea is found when, to the standard bonus, additions are made, proportioned in some way to the length of time the employe has been in the concern's employ. It is clear also that when the office records provide a careful system for rating employes an extra bonus can be given to those who have obtained the higher ratings.

There are many other amplifications which might suggest themselves to the mind of the ingenious manager, and they might go far to satisfy his sense of justice. It must not be forgotten, however, that the more complicated the system which is introduced, the less satisfactory it becomes to the employe. If he is unable to ascertain by simple rules how the amount of his bonus is determined, he is very apt to suspect that in some way or other he has been discriminated against. Of course, any dissatisfaction in the amount of the bonus goes far to neutralize whatever good effects may be expected from the bonus itself.

Such a bonus must be regarded as an investment of

the management in the good-will of its employes. It will be noted that so far as the latter are concerned, it is usually a general rather than a specific reward, since any attempt to make an adjustment of the amount received to the special merit of each recipient is likely to result in the difficulties considered in the preceding paragraph.

10. *Profit sharing.*—Such monetary distributions as are described in the preceding paragraph are not infrequently spoken of by employers as a species of profit sharing. It will be found quite often that many so called profit-sharing plans are somewhat of this nature. Whatever the excellence of such methods, it may be well to recognize that in a strict sense of the word they can not be considered as profit sharing.

The essence of profit sharing is that the amount of the payment distributed to the employe depends in a minor degree on his work, but chiefly on the profits earned by the firm. In true profit sharing the proportion of the profits which is to be distributed is fixed in advance and, with the varying fortunes of the enterprise, the amount will vary from year to year. When the amount has been determined, the share which will go to each employe can then be fixed according to whatever plan may have been previously adopted. There is room for all sorts of variations. Sometimes all workers are included and sometimes only specified classes. When there are limitations, the distribution is often confined to the employes in

executive or semi-executive positions. The underlying idea of such a limitation is that only persons of such positions, who can exercise some influence upon the business policies of the concern and thereby help to determine the profits, should have the privilege of participating in those profits.

The general theory of profit sharing is that the privilege of sharing in the profits will spur all concerned to a greater effort and, because of this, larger profits will be earned than would otherwise be the case. There can be no doubt that there are some enterprises in which the degree of effort put forth by the individual worker is a prominent element in the financial result and here profit sharing would seem to be quite in order. When there is a doubt as to its appropriateness it arises from uncertainty as to whether the prospect of a share in the profits will act as an effective incentive in stimulating the worker. There are other cases in which the amount of profits depends so obviously on general market conditions, rather than on the activity of the workers, that the validity of profit sharing as a principle of management is often questioned.

Profit sharing as above described is of rather rare occurrence in office work, altho there is an increasing body of experience in regard to it in factory labor. If its characteristics are carefully fixed in mind, it will be recognized at once that many of the arrangements which are popularly designated as profit sharing do not belong in this class. It will serve to pro-

mote clearness of thought if we remember that in the strict sense profit sharing is always measured in its aggregate by actual rather than anticipated profits, and that for the individual it is usually measured by his share in the pay-roll, rather than by any direct record of his application and energy.

11. *Other money payments.*—The matters heretofore considered do not exhaust the monetary advantages which may be derived by some of the workers in an organization. Modern business has introduced in many offices a variety of other devices designed to improve the position of the workers, which in some cases involve money payments. Such, for example, are arrangements for giving insurance to employes. This insurance may provide sick benefits or death benefits, or both. It may be arranged thru a mutual benefit association and thru group insurance. In the same class also comes the pension system.

In so far as the whole or a part of the cost of these arrangements is borne by the employer, he regards them as a part of his labor cost. But then, this would be true in like manner of the whole group of office activities which are included under the term welfare work. It is important, however, to note here as elsewhere that labor costs and wages are not one and the same thing, that the employer's viewpoint of them and the employe's are distinctly different.

The employe regards as wages, or in the broad sense

compensation for labor, only those money payments which come to all employes of the same class alike and in which all participate. The employe who is never sick may be willing to pay a reasonable sum as provision against sickness. Unless he is sick it appears to him as an outlay rather than an income. If he leaves the employ of the company, neither the death benefits nor the pension which the company provides, are a source of income to himself or his family. These things may induce him to remain in the employ of the company which offers such advantages, but it is clear that a large part of the employes of the company will never benefit from them directly.

For these reasons, a consideration of all of these eventual payments is excluded from the discussion of the worker's compensation and is reserved for consideration in the chapter on "Employes' Service."

12. *Salary increases.*—Employes who have remained for any length of time in an office naturally desire to have their salaries increased. They feel that they are worth more to the organization than they were at first. Some employers delay the increase until they are sure that the moment has arrived when, if the increase is not granted, the worker will be lost. Besides the injustice of such a scheme, they may miscalculate the time and lose a valuable worker, with the consequent cost of replacement. Where no attempt is made to keep records of effi-

ciency, a "raise," is often attained by the few who have the courage to ask for it. This puts a premium upon qualities which are not necessarily synonymous with efficiency.

The plan of adjusting salaries once a year is inelastic, but it is still popular. It is often combined with secrecy, in order to minimize the natural discontent of those who are not included in the salary increase. This plan does not take due notice of the fact that there is always a certain percentage of the employes who have been less than a full year in the service. An alternative plan is to adjust salaries on the anniversary of the entrance in the service, yet even this modification of the plan is open to the objection that the increase may not keep pace with the achievement, which is the point to be kept in mind. There is an advantage in the policy of considering salary increases semi-annually, every four months, or quarterly. It increases the feeling that a display of special effort or ability does not have to wait too long for recognition.

It is just as important to know who are not deserving of an increase as it is to ascertain who are. A clerk whom the manager is forced to ignore when advancement is being made should be given a chance to render himself worthy of it, or he should be eliminated if he is incapable. Stationary salaries and contentment do not usually go together. No matter how conservative an employe may be, his or her personal expenditures are subject to a regular increase,

and if there is no corresponding increase in earnings, eventually the disparity between income and outgo is certain to become intolerable.

If increases are taken up irregularly by the management, the employes will consider that they can raise the question whenever they see fit. But to do so keeps the salary question, one of the most fruitful sources of discontent in the office, awake at all times, pestering the employer and keeping the employe thinking more about his rights and privileges than about the work he is hired to do.

13. *Effect of general conditions.*—The frequency of taking up the increase question may well be guided by general business conditions. When the wage scale is falling it will be sufficient and satisfactory to consider increasing it semi-annually, or annually. But when the wage scale is rising, it is wise to go over the pay-roll every four months, quarterly or even bi-monthly. In this way the salaries of desirable employes can be adjusted with the changing market, thus eliminating dissatisfaction and undesirable turnover.

Before every increase period the office manager would do well to make a survey of market conditions in his locality in order that he may have a general guide for setting his increase recommendations.

REVIEW

Why is piece-work not adapted as a general rule to the payment of office employes?

How may time wages be modified by considerations of

seniority or excellence of service and what are the arguments for such modifications?

What is a bonus?

What is profit sharing? Is it applicable to office work?

Are pensions and the like to be considered as a part of salaries?

What is a judicious policy to be followed in regard to the frequency of salary increases?

CHAPTER XIII

LABOR IN OFFICE AND FACTORY

1. *Labor costs.*—The many sided problem of labor relations will occupy the remainder of this Text. Whether it confronts the office manager or the factory manager it shows common traits, and rather than attempt to present in this volume the standpoint of the office and in a later one that of the factory, it has been deemed advisable to consider in this volume the varied aspects of labor relations. This course will not only enable us to avoid repetition, but will permit a more detailed consideration of the subject than would otherwise be possible. The largest single element of cost in the upkeep of an office organization is that of labor, and in industrial plants labor costs frequently rival and sometimes overtop expenditures for material. What more natural then that the conduct of modern business enterprises, which accepts nothing as fixed and which turns the light of inquiry upon every process and every expenditure, should give careful scrutiny to labor costs and extend it to all the various aspects of labor management. When the manager here as elsewhere asks himself the question, "Am I getting my money's worth?" it leads him to a careful analysis of the productive effi-

ciency not only of the individual worker, but of the labor force as a whole.

The problem of getting the most out of his workers is no less important than that of making the most effective use of his equipment, but it is different. The problem is not one of mechanics or of engineering but one of human relations. It involves not only a keen vision of the needs of the enterprise, but skill in guiding the activities of the workers to accomplish the ends which the manager has in view. This means of course that he must have a clear understanding of the motives which determine the actions of his workers, must comprehend their point of view and be able to work with them for the good of the enterprise and for their own benefit. One can predict what a machine will do but only a very wise man can predict what the employe will do when he is confronted with a new situation or when he is given new instructions. The human tools with which business must operate are of somewhat uncertain quality and because of this fact the rules of labor management must always be stated with qualifications expressed or implied.

2. *A capable and permanent labor force.*—Discussion of labor questions from the management viewpoint, whether in office or in factory, centers around the ways and means of securing a capable and permanent labor force. In seeking this ideal, employers are guided by both economic and social motives.

If it is to attain the fullest measure of success any

enterprise must be economically administered, and since enterprise implies that money is spent to make money, both outlay and income must be carefully watched. It is obviously a waste from both points of view to employ incompetent workers, if better ones are to be had. Again, it is a waste to allow workers to remain incompetent if by care and forethought they can be transformed into competent ones. It is a further waste in many cases for an enterprise to lose its workers and be forced to replace them if such shifting in the labor force can be avoided. Economy can be briefly characterized as the elimination of waste. Labor management is therefore ever on the search to stop, as far as practicable, the waste of human energies so often found in business life. Because human beings cannot be operated like machines or driven like cattle, because no effort for better results can be in any degree successful without the cooperation of the worker, labor management develops a social and moral aspect, namely a keen personal interest in the employes' welfare.

Intelligent employers have long since learned that the best results can only be attained when the morale of the enterprise is kept at a high standard. They seek, whenever possible, to instil a spirit of friendly cooperation. It is no idle phrase that they want the workers to feel themselves as one big family. One can not make friends at once with strangers, nor can the family spirit be awakened among men who are

casually thrown together. Back of all the efforts to create the esprit de corps which shall carry on an enterprise to successful fruition, there is a growing feeling among employers that they owe something more than wages to those who work for them. But these kindlier feelings, which despite carping critics undoubtedly characterize the more progressive business enterprises of today, can not flourish except when the relation of employer and employe reaches some degree of permanence.

Tho it is not uniformly the case, competency in the main makes for stability in employment, and therefore both the economic and the social considerations above mentioned work towards the complex ideal of a capable and permanent labor force.

3. *Shifting in the labor force.*—When the labor force is regarded as a unit it is generally speaking a fairly constant quantity. In any flourishing enterprise it will tend to grow larger, usually by gradual additions. When, on the other hand, business depression occurs, employes are liable to be laid off and the force diminished. Furthermore, there are comparatively few enterprises which entirely escape the influence of variable and seasonal trade. So far as they are affected by such conditions it usually means a temporary increase of the force, followed by a cutting down of its numbers.

If the labor force is regarded, not as a unit but as a collection of individuals, it appears to be subject

to constant change. While the employer's ideal may be that of a permanent force he is aware that it can be attained only in part. As the preceding paragraph shows, he must from time to time make changes in numbers, and all these involve changes in the personnel of his establishment. But these are not the only changes which occur by the direct act of the employer. He finds himself confronted by the necessity of changing persons without changing numbers, when he has to discharge some workers and replace them by others.

The greatest amount of change in the labor force, however, comes from the action of the workers themselves in giving up their positions. The motives which actuate them in this matter are of the most diverse nature, and will be considered later. We are here concerned with the fact. Figures collected by the United States Bureau of Labor Statistics for the year 1927, covering about 300 reporting companies, divide them as follows: lay offs, 20 per cent; discharges, 14 per cent; and voluntary separations, 66 per cent. In passing it may be noted that the last named figure contains a very small number of separations due to death and to accident to which the term voluntary hardly applies. The number is, however, too small to form a separate class.

While such figures classify separations in an instructive way they tell us nothing of the magnitude of this phase of labor management in comparison

with the force usually employed. This must now be considered.

4. *Measuring labor stability.*—At any given time the composition of the labor force of any enterprise as respects the length of service of its members will reflect in some measure the fact that changes in the force are frequent. While some will have years of service to their credit, others will have been but a short time with the concern. The labor force is ever renewing itself and in many cases the number of recent recruits is quite considerable.

The following figures were collected by the United States Bureau of Labor Statistics, for an automobile and motor truck factory, and are selected from many that are available to illustrate this situation.

Length of Service	Number	Percent of all employed
1 week or under	95	2
1 week to 2 weeks	85	2
2 weeks to 1 month	58	1
1 month to 3 months	488	10
3 month to 6 months	390	8
6 months to 1 year	783	17
Total under 1 year	1,899	40
1 to 2 years	705	15
2 to 3 years	533	11
3 to 5 years	785	17
5 years and over	772	17
	4,694	100

The purpose of the table is to measure the degree of stability in the force but by inference it throws light also on the fact of changes. If we consider one year's service as the mark of a seasoned employe, it will be noted that when the inquiry was made, three-fifths of the force were in this class and two-fifths were more or less new to their work. If six months were considered ample time to make the employe a veteran in his work, then over three-quarters of the employes could be regarded as "old timers." But let us hold to the year's service as the basis of our analysis, as this figure is used in other calculations to be considered shortly.

In order to bring out the meaning of the figures cited, assume for a moment that after entering the employ of the factory no one left it. In such a case the 1899 workers of less than one year's service would represent the growth of the enterprise. Other records of this factory tell us that in the year preceding the analysis above given the company hired 3,552 men, while 2,878 left its employ. The net gain was 674 men, who are represented among the workers of less than one year's service. However, if only 674 were new places the remainder of the new men 1,225 were obviously appointed to take the place of some who left. We know in this case that in the course of the year more than twice this number left. It is clear then that when both appointment and separation occurred during the year previous to the date of the record, they would leave no trace in the

composition of the force at the time the record was made.

Figures such as have been cited serve useful purposes, but measuring the amount of change which takes place is not one of them. They are in effect a census and like a census they give evidence of the changes taking place but do not measure them. For such a purpose we must resort to figures compiled from the day to day record of happenings and build up our measures in analogy with the processes of vital statistics in calculating birth and death rates.

5. *Measuring instability, turnover rates.*—The term labor turnover is used somewhat loosely to embrace all the phenomena of shifting in the labor force and sometimes more definitely to express numerically the amount of shifting, or the turnover rate. The general purpose is to establish a relation between the number of changes and the force usually employed. The results of the necessary calculations to ascertain this relation are usually expressed on a yearly basis. The first results for a month, for example, are multiplied by 12 and the result shows the annual rate applicable to the month in question. By this device all rates, whether for longer or shorter periods, are directly comparable.

6. *Standard turnover rule.*—The standard rule for calculating the annual turnover rate is to divide the number of separations of every kind occurring during the year by the average number of persons employed in the same period. Using the letter T for

the turnover rate, S for the separations and A for the average working force, the rule is sometimes briefly expressed by the formula,

$$T = \frac{S}{A}$$

Variations of this rule have been suggested and used by a number of investigators and writers, but it is now conceded that the rule stated, which is that used by the United States Bureau of Labor Statistics, is the most generally acceptable. It is simple of application and has come into almost universal use. It is needless to point out that the comparability of turnover statistics is promoted by having a commonly accepted rule of calculation.

The obvious purpose of the rule is to compare changes in the labor force with the number that approximately represents the usual working force. Where production is comparatively uniform from year to year and uniform thruout the year the actual force at any given time will closely approximate the average. Rarely however will this be the case, and it will be necessary, as the formula requires, to resort to the average. The number employed may fluctuate up and down thruout the year, or what is probably more frequently the case, it may, in normal times, be subject to a more or less regular growth. To some extent therefore changes in the labor force in so far as they affect the average are reflected in the figure used as a basis for calculating change.

If the number employed were uniform thruout the

year the amount of change calculated upon the accessions and upon the separations would be identical. When the number varies the calculations are likely to give different results. Change could be measured by either process. When the industry is a growing one with an increasing pay-roll, change measured on the basis of accessions would give higher results than when measured on the basis of separations. It is something more than convention which has determined the choice of separations as a basis for calculating turnover. Turnover besides measuring change usually implies a problem of management. Separations with a growing pay-roll, and such growth is a normal condition, imply replacements, and the turnover figures thus calculated become a rough measure of the administrative problem of replacing those who leave.

7. *Unusual conditions.*—There may be extraordinary conditions when the standard rule does not give a correct picture of the amount of replacement necessary, because the pay-roll is diminishing rather than increasing. Many concerns which were expanding in 1920 cut down their forces or allowed them to diminish in 1921. We can therefore well imagine the following situation.

	1920	1921
Pay-roll at beginning of year	100	120
Pay-roll at end of year	120	100
Average number on pay-roll	110	110
Number hired during the year	50	10
Number leaving during the year	30	30

In this case the turnover for 1920 is 30 divided by 110 or 27 per cent and by applying the same rule to 1921 an identical result is obtained. In such a case as this the standard practice would merely note the diminishing pay-roll as one of the prominent factors in determining the turnover rate for 1921. In view of the fact that, as we shall see, turnover is the resultant of many factors, and that in any case the gross turnover rate needs critical analysis if its real significance is to be grasped, the procedure here indicated is advantageous in that it preserves a uniform formula for all cases.

There is something to be said for a change of method which would, without further explanation, bring out the essential differences between the two situations contrasted above. The argument rests upon the contention that the essence of turnover calculation is to measure, at least approximately, the amount of replacement, and that therefore the turnover of 1921 should be measured by the number hired. In this case a turnover rate of 27 per cent in 1920 and of 9 per cent in 1921 would express more clearly the relative magnitude of the manager's problem of replacement. From the sole point of view indicating replacement the rule for figuring the turnover rate might be stated as follows: Divide the number of separations or the number of accessions for the year, whichever is less, by the average number employed for the year and express the result as a percentage.

It can not be too strongly emphasized, however,

that whether calculated by the standard rule or the modification here suggested, the turnover rate is at the best only a starting point for further analysis of all the conditions and circumstances surrounding changes of employes. For example, if the management adopts a policy of reducing the force and lays off employes, the same questions are not involved as if the reduction is brought about by the resignation of employes. In neither case does a problem of replacement arise but in the latter there may be evidence of defective conditions in personnel relations. The significance of turnover will engage our attention later. At present we are concerned with its amount.

8. *Turnover rates in practice.*—The application of the standard rule gives widely different results in different establishments and in different lines of industry. From a survey conducted by the Merchants Association of New York some time ago it developed that the average yearly shift of labor or turnover for skilled factory workers in New York City and vicinity was 125 per cent; for unskilled factory hands 225 per cent. In two-thirds of the 42 plants investigated, turnover ran between 100 per cent and 250 per cent, the minimum being 16⅔ per cent and the maximum being 338 per cent. This survey was fairly representative, including 10 metal products and machinery plants, 11 food products, 3 rubber goods, 3 musical instruments, 2 printing, 2 jewelry and kindred lines, tobacco products, stationery supplies, and one each

of shipbuilding, repairing and marine equipment, silk goods, men's clothing, women's wear, and fire apparatus. Slightly more than one-fifth of the plants had a turnover of 100 per cent; half of them less than 150 per cent; and one-third of 200 per cent or more.

Published results of turnover inquiries relate chiefly to factories. Turnover is in like manner a problem of office management, particularly where many women are employed, but the probabilities are that in general it is less in amount than in factories.

9. *Discharges and lay offs.*—There are as we have seen various elements in the separations from employment, and it is in order to consider their relation to turnover figures. Discharges and dismissals have exactly the same effect as voluntary withdrawals. In all cases the places left vacant must under ordinary circumstances be filled. Discharges for incompetency and insubordination are not frequent, but the number is in some cases larger than it ought to be. When it is considerable it can often be reduced by proper care in the hiring of employes.

In the case of a partial reduction in force there may be only a shade of difference in the method of selecting the persons to be let out and that followed in the case of discharge. But from the standpoint of turnover the case may be quite different, in that no replacement is contemplated. Several effects may be noted.

The lay off may be of such duration as to constitute

a perceptible diminution of the force. Hirings then become less numerous than separations. Labor turnover rate as a measure of replacement is then calculated on the hirings and is unaffected by the lay off. If, on the other hand, the persons laid off are at a later date replaced, the separations and hirings neutralize each other and the lay off increases the turnover rate.

10. *Temporary employes.*—In the preceding paragraph we discussed the case, in which, for business reasons, certain men were let out and afterward the same men, or an equal number of men, joined the labor force again. In the more picturesque than accurate language of writers on this subject "firing" preceded "hiring." Let us now consider the converse case of temporary employes where "hiring" precedes "firing" and trace the effects of such temporary employment on turnover rates.

Let us assume that a given retail mercantile establishment from January 1 to December 1 employs each month 100 persons. If for the sake of simplicity we assume that no changes take place in the personnel, the labor turnover rate for these eleven months will be zero. Now, assume that for the holiday season, the store takes on 60 extras on December 1 and dismisses them on December 31. What will the annual turnover be? The average number of employes for the year now becomes 105, the separations for the year number 60 and we can figure a turnover rate of 57 per cent.

Temporary or seasonal employment may, in certain instances, become an important element in determining the gross turnover rate and its possible influence should be thoroly understood. The problem of reducing this seasonal occupation and placing industry if possible on a basis of more uniform production is not one of labor management, but any success which may be attained in this direction will react favorably upon labor relations.

11. *Voluntary separations.*—Taking industry as a whole the primary cause of labor turnover lies in the action of the employes themselves. With or without notice they quit their jobs. The real and ostensible reasons for quitting are too numerous to be enumerated in detail. Some of them lie deep in the roots of human nature; some men are restless and seek change and variety, some are by nature sons of rest, and lack the energy for anything more than intermittent labor. Some of the causes of quitting arise from the family and social life of the individual, changes of residence and like matters. Some of them grow out of conditions of labor in the particular establishment in which the workers are employed.

Many separations must probably be laid to the employer's account. He is more or less responsible for separations from service which are due to long hours, low wages, bad working conditions, failure to protect the worker properly against accidents, bad attitude on the part of foremen, superintendents or

department heads towards the employes which prevents the growth of interest and friendly feeling, unfairness in making promotions and inefficient management in general.

All investigations, which have been made, show that a large percentage of the trouble is due to incompetence on the part of the workers and this in turn may often be ascribed to faulty methods of selecting employes on the one hand, and, on the other, to the lack of proper facilities for training them in the work entrusted to them, especially when this work is new to them.

12. *Interpretation of turnover figures.*—It is clear from what has been said that turnover figures may be the composite of widely varied causes, and that without further analysis and comparison, figures for gross turnover have comparatively little significance. The factory manager, for example, who discovers that he has a turnover of 100 per cent may have cause for concern or may have cause for congratulation. On the face of it there is nothing in the figure to declare it favorable or unfavorable. It does not follow that one concern with a labor turnover of 50 per cent has more favorable labor conditions than another in a different line of industry with a turnover of 70 per cent.

Many causes affect the figures for gross turnover. With no attempt to exhaust the subject, mention may be made of some of the more important. Labor

turnover for example varies with the general condition of the labor market. It grows in periods of prosperity when jobs are easily found, it dwindles in periods of depression when men cling more tenaciously to their jobs.

Among different industries again, labor turnover is affected by the more or less seasonal character of one industry as compared with another. Highly seasonal industries naturally show a high rate of turnover. Generally speaking the amount of turnover will depend upon the relative proportions of skilled, semi-skilled and unskilled labor, which it employs. The last named is more mobile than the others and changes employers more frequently. The sex of the employes is another element which influences the turnover rate since female employment is so frequently terminated by marriage.

The fact that turnover figures must be interpreted with caution does not deprive them of their usefulness, but it divests them of the exaggerated importance too often assigned to them. It is clear that some degree, and oftentimes a high degree, of turnover is unavoidable; it is the necessary consequence of the nature of the particular business and the circumstances under which it is conducted. Whatever the turnover in an enterprise, whether large or small, its significance can only be measured by a comparison with other enterprises of approximately the same kind. No "normal" turnover for all kinds of busi-

ness enterprises can be established. The most that we can do is to get an approximate measure of usual or average turnover in certain different types of enterprises.

From what has been said, it is clear that the manager of an enterprise must carefully analyze his own turnover before he considers methods of reducing it. His gross turnover figures should be the starting point for a study of turnover by departments and by occupations. They should be supplemented by information regarding length of service. As an aspect of labor management turnover can not be dismissed by a mathematical formula but must be the subject of intensive study in each particular case.

13. *Effects of turnover.*—However caused there can be no doubt that labor turnover weakens productive efficiency. From every point of view the necessity for replacing the workers who have quit is a productive loss. A new worker always requires some time to find himself, and a certain period must elapse before he is adjusted to his new duties. The loss of a responsible worker may mean the importation of a new man of presumably the same grade from outside employment, or it may mean a series of promotions and the filling of a place requiring inferior qualifications. In the latter case the loss of productive power in any individual position may not be so marked but when the whole is counted up it may well amount to the same thing.

Various attempts have been made to measure this loss in productive power in monetary terms, to fix what has been strikingly called "The cost of hiring and firing" in dollars and cents. The statement that each new employe costs those who employ him $50 is quite frequent and the figure is sometimes raised to $75 or more. Such figures are useful in pointing out the fact that elements of cost are involved in the matter and they serve a useful purpose when they cause the business executive to scrutinize the costs which these operations are causing him.

The important value of all these investigations into the cost of labor turnover is not that the results can be applied to other concerns but that they have indicated where losses due to labor turnover should be sought. These losses may be summarized as follows:

Securing and interviewing new men includes cost of the executive and clerical help in the employment department, advertising and the preliminary mental and physical examination, together with research work that is done to develop the sources of labor supply. The instruction of new employes in their duties will necessitate wear and tear and repairs on machines over and above the amount which would occur under ordinary conditions, and in addition there will be an additional amount due to increased tool cost and more rapid depreciation of machines thru necessarily rough treatment and careless use. There will also be

a loss due to reduction in production because of unfamiliarity of employes with the machines and their surroundings. These costs may be found by dividing all expenses for the ordinary production of a definite number of articles of groups of both skilled and untrained workers, subtracting the difference from the units produced by the unskilled employes and thus getting a definite figure per unit. The cost of spoiled work may be determined by comparing the wastage of new with that of skilled employes and charging the difference to this cost.

It will be clear that the total cost will vary with the class of work and character of employes, and it is not an easy matter to get mathematical statements that are reliable and conclusive. Such as have been obtained are somewhat startling. Mr. Alexander states that the average estimate of cost per replacement that he obtained by inquiry of a number of managers was between fifty and one hundred dollars for each new employe. In his investigation he has classified the employes considered into five classes as follows: A, highly skilled mechanics; B, mechanics of lesser skill who can be trained in two or three years; C, operators and piece-workers who require only a few months to train; D, unskilled laborers and helpers; E, clerical help in shops and office. Using this classification, Mr. Alexander gives the following estimates of the cost of hiring new men and of rehiring old employes:

COST OF HIRING

Group	Hiring	Instruction	Wear and breakage	Reduced production	Spoiled Work	Total Cost	Cost of rehiring
A	$0.50	$ 7.50	$10.00	$20.00	$10.00	$48.00	$10.00
B	.50	15.00	10.00	18.00	15.00	58.50	20.00
C	.50	20.00	10.00	33.00	10.00	73.50	35.00
D	.50	2.00	1.00	5.00	.....	8.50	5.00
E	.50	7.50	1.00	20.00	.....	29.00	10.00

Other investigations which have been made into cost of turnover confirm the fact that the cost of hiring a new employe is often considerable and that it varies greatly according to circumstances. It is perhaps worthy of passing note that many writers suggest, if they do not state, that the cost of hiring a new employee is a heavy burden on industry. This may often be true, but the cost incurred in hiring new people to increase the working force should be sharply distinguished from that needed to effect replacements. The first may be a legitimate investment of money which the management is glad to make while the second may well appear as a more or less unnecessary evil.

14. *Avoidable and unavoidable turnover.*—We have considered the question, what makes labor turnover, and emphasis has been laid upon general conditions. There can, however, be no doubt that work-

ing hand in hand with these general causes there are causes peculiar to the particular enterprise, its policies, its personnel, its equipment and the like.

These special causes of turnover may, with proper corrective measures, disappear and hence they assume the guise of causes of avoidable turnover. Insofar as the amount of turnover is deemed a test in inverse ratio of the excellence of management, it must refer to such avoidable turnover. There is, however, an almost infinite difficulty in getting at any statistical measurement of this fact since so many subjective elements enter into the determination of what is and what is not avoidable. Few managers, whether of factories or offices, would be so opinionated as to believe that all working conditions and all relations with the employes were so absolutely perfect that nothing whatever could be done to improve them. In the improvement of such conditions and relations lies the hope of reducing the avoidable turnover, and the efforts of management are bent in that direction.

15. *Methods of reducing turnover.*—It needs no argument to demonstrate that whatever can be done to mitigate the evils which result from a rapidly shifting labor force will be a gain to industry and we must review the various measures which experience has evolved for the purpose of accomplishing this result. The first logical step would be to find out, thru an accurate analysis of the reasons for leaving, just how much turnover is costing, and on this basis what sum

may be spent for cutting it down. The natural methods that suggest themselves as remedies are:

(a) Improved methods of hiring and discharging men thru a centralized employment department
(b) Facilities for training new men for their duties
(c) Reducing fluctuations in the volume of work and adjusting wage payments, overtime, etc.
(d) Bettering working conditions
(e) Giving financial inducements in the form of high wages or participation in a profit-sharing or bonus plan
(f) Medical supervision and care to safeguard the employes from sickness and accident
(g) Making work in the organization a career for the employe and thus providing his future
(h) Human interest in the employe with a view of securing his interest and making him contented

Turnover can not be reduced by attention to any one factor. Success in this field depends upon the study and adjustment of all relations with employes. These matters are discussed later in this Text.

16. *Problems of labor.*—The problems of labor management might be summed up as getting the right employes, keeping them and developing them. It would be hard to say which is the most important but inasmuch as one can not keep employes unless they are of the right sort, the problem of hiring suitable persons and, as far as possible, only suitable persons, becomes the first step in an intelligent labor policy.

Recent years have amassed a vast amount of discus-

sion and a large volume of experience with reference to the methods of employing new help. It is more and more clearly recognized that a good start is half the race. It is not surprising, therefore, that a properly organized plan for hiring new workers has been proclaimed as a primary measure for reducing labor turnover. To the consideration of these matters the two succeeding chapters will be devoted.

But methods of selection are not infallible and the new employe must be adjusted to the work assigned to him. Leaving him to "find himself as best he may" often provokes discouragement, and good working material is lost to the concern because it has lacked proper guidance. Hence the importance of a system of training, the purpose and methods of which are considered in another chapter.

The right man in the right place may fail of his best effort if he loses heart and has no encouragement to do his best. Measures to maintain the morale of an establishment to stimulate the workers must therefore receive our attention.

Finally, man needs certain creature comforts if he is to be happy and contented in his work. The final chapter, therefore, considers the various forms of employe service.

Briefly the ideals of labor management are to secure (1) proper selection, (2) capacity and development, (3) energy and interest and (4) contentment, and to the practical means of securing these ends the remaining chapters are devoted.

REVIEW

What are the advantages to an enterprise of a capable and permanent labor force?

How is the permanence of the labor force at any given time approximately measured? Why does this measurement fail to show inversely the amount of change which takes place?

Describe the method of measuring change for any period and the standard formula for turnover rate.

Explain the effects of discharges and of temporary employment on the turnover rate.

What conclusions can be drawn from a high turnover rate?

Why is labor turnover expensive and what are the elements of such expense?

Summarize means suggested for reducing turnover.

CHAPTER XIV

SELECTION OF EMPLOYES—PRELIMINARY WORK

1. *Importance of proper selection.*—The importance of proper selection of employes can hardly be over-emphasized since in the last analysis an organization depends upon the human element for success. The management may provide model equipment and may develop faultless systems but the organization will not function successfully unless the individuals who actually do the work are able to cooperate.

Poor selection is costly. While an unsatisfactory worker can be easily removed it must be remembered that every discharged employe represents no small investment of time and money in hiring, training and supervising. As already stated, fifty dollars is a familiar and probably conservative estimate of the average loss occasioned when a person who is not able to measure up to the task for which he or she was hired, is discharged.

Aside from the monetary loss that can be in part, at least, measured there is an even bigger loss in the weakening of the esprit de corps caused by a rapid turnover of help.

2. *The art of proper selection.*—It would be absurd to assume that any plan can be developed which would

wholly eliminate errors of selection. There are, however, definite principles and methods to be applied that will reduce the chance for error to a minimum. In the first place, experience has proved that if the responsibility for hiring is centered in one individual, or in one department, it is possible to get better results than if it is scattered among a number of department heads. Secondly, if every position is carefully analyzed so that the requirements are clearly understood there is much less chance for error in placing employes than if the requirements are guessed at.

3. *Centralization of employment.*—It is generally conceded good administrative policy to have as few functions as possible performed by any one individual. In small organizations the manager or superintendent may hire the help. But in organizations of any size this duty should be in the hands of one man devoting all his time to the problem of personnel work. The tendency in organizations of 300 or more employes is to handle this problem thru a specialized department, known as the personnel department, with a separate manager called the personnel manager.

4. *The personnel manager.*—In executive positions, of whatever nature, personal qualifications such as character, judgment, initiative, tact and intuition considerably outweigh purely technical knowledge. A man who is in touch with the personnel of the whole organization, and who is big enough to solve all the problems incident to such contact must necessarily possess such personal characteristics to a high degree

of development. It is no easy matter to act as the connecting link between the management and the employes, possess the confidence of both, and at the same time have enough familiarity with the operations of the organization to see that employes qualified to perform the work are properly placed. Such a man must be courteous, even-tempered, patient and should be a good mixer. He must be at once broad-minded and approachable, ready to listen sympathetically to those who come to him with complaints and suggestions.

It is obvious that, when organizations, hiring in quantity, select men of unusual ability as employment managers, smaller organizations should not entrust the hiring of help to men of mediocre ability.

5. *Job analysis.*—A few decades ago, it was fairly easy to measure the all-around ability of the mechanic or office clerk against the general character of his work. The recent extreme division of work, reducing the man's work to a few functions, has created a need for workers with definite characteristics. Thus, one job requires dexterity, another quickness of vision, another concentration or some other quality or combination of them.

Just as it is advisable to have maximum and minimum limits for material in stores, so it is becoming increasingly necessary to set similar limits for the aptitude of workers.

While it is clear that men should be employed for duties for which their personal characteristics and

training fit them, experience shows that we know but little of the exact requirements—or the classification of the operations of a job that determine a worker's ability to fill it.

Considered in a broad sense, job analysis consists of a study of the principles underlying separate jobs and operations so that "the one best way" may be definitely settled on, standardized and applied. In preparing a job analysis, each separate operation is carefully studied and analyzed as it is carried out under present conditions. Variables are adjusted and standards of methods of operation and amount of work under ordinary conditions are determined. Each job should be studied and recorded from the point of view of workers on similar jobs, or on work requiring special qualifications, and which would not be confused with that of the others.

It is the logical method of applying scientific management, building up an organization, unit by unit, until the work of the whole is standardized. A job analysis, even of a simple operation, requires considerable time. But in the end, particularly when there are a number of workers on similar jobs, the effort required to make a study of set standards will be paid for by the increased efficiency. Naturally, changes in equipment or methods will necessitate the existing standards being improved by further study at frequent intervals. It is not exploitation, but simply getting facts so that work may be equalized and the maximum results accomplished with the least effort

and the greatest benefit to both management and men.

The management is able to plan work, being assured that standardized methods of operation will closely approximate estimates; the sequence of operation is clearly laid out; the data are secured for job specifications for the employment manager; and jobs will be coordinated thru a knowledge of the succession of operations in each department. Additional benefits accrue thru savings in material by experiments during the analysis. The worker secures the definite advantages of a regular flow of work, increased productivity, proper training and incentives for production. The prospective employes understand definitely just what their new jobs consist of and what is expected of them.

6. *Job specifications for factory workers.*—The amount of information necessary for selecting the right worker for any given job varies, of course, with the complexity of the work to be accomplished. The following list, as devised by Mr. Eugene J. Benge, contains the items most prominently found in factory job specifications. Not all of them would go in any one specification, but they will indicate the general principles to be followed:

General information:
Name of firm, department, foreman, immediate superior, job (other names for job).
Job symbol or code word.
Date.

Number of subordinates.

Description of job duties:

Processes: general character and complexity, logical sequence, relation to other jobs, more important duty.

Machinery: description of machinery used, responsibility for repairing, cleaning and oiling, control of speed and power, tools used, issuance and retention of tools.

Materials: description of materials used, size, weight, etc., and frequency with which they vary. Issuance and disposal of material.

Nature and conditions of work:

Continuity: permanent, temporary, overtime, layoffs.

Time: day or night.

Hours: from when to when.

Earnings: minimum, maximum, average, schedule of increase.

Methods of payment: day, hour, week, month, piece, task and bonus, etc. Premium, bonus, profit-sharing. Overtime rate. Sunday and holiday rate.

Place: outdoors, indoors, platform, overhead, underground.

Cleanliness: clean, dirty, greasy.

Atmosphere: hot, cold, wet, moist, very dry, dust, fumes, odor.

Ventilation: poor, adequate, draught.

Physical activity: standing, sitting, stooping, walking, climbing, lying.

Operation: variety, repetition, automatic.

Fatigue: heavy, medium, light.

Hazards: fire, accident, death, eyes, ears, heart, strain, etc.

Nerve strain: solitary, noisy, very noisy, driving.

Eye strain: darkness, glare.

Skill: coarse, fine, exacting.

Dexterity: quick, slow, dangerous.

Fellow workers: laborers, mechanics, clerical.

Promotion: to what; how soon?

Common reasons for leaving.
Requirements, physical:
Limits (from what to what) and preferred, sex, color, age, height, length of arms, length of legs, lifting strength, gripping strength, lung capacity, sight (right and left eyes), hearing.
Requirements, mental and social:
Intelligence: education: commercial, cultural, technical; English: speak, read, write; temperament: nervous, persistent, deliberate, phlegmatic, or meek, congenial, aggressive, driving. Interests. Social status. Bonded?
Experience:
Necessary: kind of experience, number of years.
Similar work.
Similar work in plant.
Trade ability: expert, journeyman, apprentice, inexperienced.
Miscellaneous:
Tools, clothing and equipment to be supplied by worker.
Married or single.
Alien, citizen, first papers. Nationality preferred.
Remarks.

7. *Job specifications for office workers.*—Work in offices is more easily standardized than work in the factory and the qualifications for any one job would be correspondingly more simple. The following specifications for the position of a stenographer will serve as an illustration:

Age: 18 to 25
Education: At least three years' high school training. High school graduate preferred.
Experience: At least six months.
Essential qualifications:

1. Touch typist (Speed equivalent to 800 five and a quarter inch lines a day.)
2. Stenographic speed equivalent to one hundred words a minute.
3. Accurate.
4. Adaptable.
5. Good hearing.
6. Personal neatness above the average.
7. Pleasing personality above the average.

Salary: $30 a week maximum.
$20 a week minimum.

With such statements of requirements at his command, the employment manager has something definite to work on, and there is no need of referring to the foreman or department head when a vacancy must be filled. Setting down the requirements of a job in this manner classifies many debatable points. It not only gives the employment manager a definite basis for selection, but it also gives the prospective employe a clear understanding of the work he is to do, the conditions under which it is to be performed, the possibilities for advancement and the incentives held out for greater production.

8. *Sources of help.*—Proper selection requires that the person responsible for hiring be thoroly familiar with all the possible sources of help and know what sources are best for each different class of help required. Generally it is not wise to rely exclusively upon one source of help. Experience usually shows that at times one source is better than another. In

this connection, if the facts are available, it will prove profitable to analyze the employment records with a view to determining from just what sources help has been obtained in the past. This analysis will indicate what sources have proved most profitable in the past and will also serve as a guide in the future.

The sources of help fall into the following classes: employment agencies, recommendations of employes and friends, advertising, schools and churches, and the concern's own application file.

9. *Agencies as a source of help.*—For organizations in large communities, employment agencies offer a convenient source from which new employes may be secured. Reliable agencies usually refer only applicants that are reasonably worth interviewing and many companies rely mainly on them for help. Agencies which charge employes for their services are sometimes over-zealous in their desire to place people. Free agencies are usually a little less careful in their selection. The value of agencies as a source of help can be considerably increased by establishing personal relations with those in charge so as to assure a clear understanding of the client's requirements.

Municipal and national employment agencies are a relatively new source of labor supply, and according to their scope, can render real service, if proper cooperation is given them by employers. They have, as an ideal, the placing of every worker in the United States in a job where he will give the largest produc-

tion with the least cost to himself and the community at large. The aim is certainly deserving of encouragement and help.

10. *Employes and friends as aid in securing new employes.*—Trustworthy employes are often glad to recommend persons for employment. Some companies secure the majority of their new employes thru the recommendation of present employes. It must not be overlooked, however, that this system should be cautiously used in order to avoid fostering nepotism and creating ill-feeling in case the person recommended is rejected. To guard against these results, some companies go to the other extreme of not considering applications from persons who are relatives of those already employed.

The friends of an organization will frequently suggest applicants. For more important positions this source can often be used to good advantage. Rank-and-file workers secured from this source are generally less desirable, because, in suggesting this type, the outsider usually gives little thought to the caliber of the individual, and is frequently guided by the desire to do some one a favor. Of course, no hard and fast rule can be laid down in this respect, but it is well to realize the drawback incident to this method of securing employes.

11. *Advertising for new help.*—For securing rank and file workers, advertising is ordinarily less effective than the preceding sources mentioned. However, it may be used effectively when an immediate increase

of labor is essential, and when quality can not be too closely considered. Advertising for this type of assistants is usually done in the "help wanted" columns of newspapers, mentioning the name of the company and where and when to apply.

Advertising is usually an excellent method of obtaining men for higher positions where the applicants are expected to furnish unquestionable credentials. For this purpose "blind advertisements" not giving the name of the company, but specifying the position and qualifications are usually employed.

Care should be taken to see that the advertisement appeals to the exact class of employe desired. The amount of salary or wages should be mentioned, together with the general qualifications necessary. There should be no misleading or glittering generalities that would secure a large number of skilled applicants for a few relatively unimportant jobs.

12. *Churches, clubs, records aid in obtaining new employes.*—For clerical positions, churches, schools and clubs are often able to provide good workers. This is particularly true of positions where experience is not essential. For some classes of work, it is a good plan to appeal to a class of employes not always sought by other companies, the older men. They have fewer distractions outside of their work and usually are very steady, appreciate good working conditions, and have a stabilizing effect on the younger members of the working force.

Another source is the application file made up of

applicants previously interviewed but not hired. It oftens happens, however, that many good applicants are placed elsewhere by the time the vacancy occurs. This objection becomes less important if the organization is one that offers unusual advantages, and can still attract its former applicants.

13. *Schools as a source of help.*—If an organization is large enough to afford such a plan, one of the best methods of securing good labor is thru apprenticeship systems, run in connection with educational effort. Industrial education, of some kind and degree is rapidly becoming an essential requirement for factory workers, and many large companies have either started schools of their own or have made arrangements with local educational institutions, so that a constant stream of thoroly trained young people are passing into the industry. Many large plants have auxiliary school shops organized for the special purpose, and cooperative school-shop methods are becoming more common daily. No large plant can afford to neglect this method, for in all probability it is the ultimate answer to the problem, and the foundation for maintaining the industrial population.

REVIEW

What are the advantages of the systematic methods in hiring employes under the direction of a personnel manager? What kind of a man should the latter be?

Describe what is meant by job analysis, and job specifications.

From what sources can the personnel manager draw his new employes?

What are the merits and demerits of each of these sources?

CHAPTER XV

SELECTION OF EMPLOYES (*Continued*)

1. *Reception of applicants.*—Every applicant for work should receive a cordial reception and a complete hearing. A comfortable and pleasant place to wait should be provided. It is a good plan to have descriptive literature on hand that will give the prospective employes a chance to acquaint themselves with the general policies or advantages of the company while waiting for an interview.

Since first impressions are usually lasting ones, it is well that they should be agreeable to the applicant. If the reception accorded him leads him to form an unsatisfactory first impression it may result in losing good material or may go a long way to discount future development work if the applicant is hired.

2. *Preliminary interview.*—The interview is the first and a very important step in the actual hiring of an employe. It enables the person hiring to establish a general mental and moral rating for the applicant. He should take into consideration, in determining upon the mental rating, the dress, general appearance and attitude of the applicant. For instance, the condition of clothes, hair, teeth, nails, etc., are indications of personal habits. The attitude of the ap-

plicant is indicative of sincerity, capacity for development, and general ability. Careful observation of the eyes and face of the applicant should give the interviewer a fairly reliable indication of the moral rating of the applicant. Of course allowance should be made for nervousness on the part of the applicant, but if he is not able to make a fairly satisfactory first impression it is rarely wise to add him to the force.

During the course of the interview the interviewer should ask himself certain questions:

Is the applicant the best that can be secured under existing circumstances? Has he the necessary ability, character, personality, education and health? Is he capable of development in this particular position, or in the one to which it may lead? Applicants who are totally unfitted for employment in any capacity with the organization should be turned away at the preliminary interview. There is no use having an obviously undesirable applicant fill out an application blank or go thru tests.

3. *The application blank.*—The application blank, interpreted in the light of job specifications, is helpful in deciding whether or not an applicant is qualified to fill the position for which he is applying. It should be used in conjunction with the interview and when so used serves as a check against the impression gained from the interview. At the time of the interview there may be no vacancy which the applicant is qualified to fill. The interview will be time wasted unless the application blank be filled in with the definite

record of the applicant, to be filed away and referred to at a later date when such an opening occurs.

In using the application blank it is well to explain to the applicant that the questions are not asked out of idle curiosity but for the best interests of all concerned. The applicant should be left in perfect freedom in answering the questions. The failure to answer questions often serves as an excellent sidelight on the ability and integrity of the individual. The care with which the application blank is filled serves to gauge the applicant's qualifications as to neatness, accuracy, exactness and power of expression. Employes can not be properly placed nor can their capabilities be properly developed unless their past history is sufficiently known. The information on home conditions indicates whether it really is to the applicant's best interests to accept the position. The record of previous experience throws light among other things on the ability, ambition and loyalty of the applicant. Certain questions are introduced to check the mental grasp of the applicant. For instance, "In school what studies did you like best and what least?" "If you could have any position you wished for, what would it be." The answers to such questions, checked against the position for which the applicant is applying, and against his general appearance, prove helpful in determining the mentality of the prospective employe.

4. *Information on application blank.*—Opinions differ as to what questions should appear on the ap-

CONFIDENTIAL APPLICATION FOR EMPLOYMENT

This application is not only a factor in considering you for employment, but is also kept as a permanent record of you if employed. Please fill it out with this point in mind.

Date.....

Name (in full) ..... Phone.....

Address (in full).....
Street and No. City State

Position applied for?.....Salary expected?.....

Where born?..... Date?..... Living with parents?.....

If not, why not?.....With whom?.....

Married?..... How long?..... Number of children?.....

What is your father's name?.....Occupation?.....Nationality?.....

What is your mother's name?.....Occupation?.....Nationality?.....

Are you employed at present?.....

How soon could you take a position with us?.....

EDUCATION

Please record your education below.

	Name of School	Length of time attended	Graduated
Primary			
High School			
College			
Bus. School			
Trade "			
Night School			

In school, what studies did you like best?.....

What least? .....

Can you speak any foreign languages?.....What are they?.....

Figure 7

PREVIOUS EMPLOYMENT AND REFERENCES

(Give in chronological order beginning with most recent position)

	Present or last employed by	Previously employed by	Previously employed by
Name of firm			
Name of Employer			
Address, Street,			
City and State			
Nature of Business			
Length of Service			
Position held			
Salary			
Reason for leaving			

Personal References—Please give the names and addresses of at least two persons of good standing, to whom you are not related and by whom you have not been employed.

Name.....

Address.....

Street and No. City State

Name.....

Address.....

Street and No. City State

Name.....

Address.....

Street and No. City State

GENERAL

Have you any friends or relatives in this office?.....Who?.....
Who recommended you to us?.....
Are you qualified to do any other work than that for which you are applying? ..... What?.....
If you could have any position you wished for, what would it be?.....
What is your religion?.....
Are you a member of any athletic, social or church organization?.....
What are they?..... How often do you attend?.....
Do you engage regularly in any athletic sports?.....
What are they?.....
Have you any hobby such as music, dancing, painting, drawing, etc?...
What is it? .....
Is there anyone dependent on you for support?.....Who?.....
Have you a savings account?.....What bank?.....
Remarks: .....
.....

Figure 7a

plication blank. Generally speaking, it is better to have too much information about an applicant than too little. A man who is seeking work is willing enough to give information concerning himself. When he is once employed, he is sometimes antagonistic to further detailed questioning.

The Committee on Employment Plans and Labor Turnover of the American Management Association has ascertained some interesting facts on the subject of questions appearing on application blanks. The following information was secured from a number of organizations as to the questions asked on their application blanks.

Question asked	Percentage of those who asked that question
Previous employment, general	100
Age	97
Name of former employers	97
Duration of employment	94
Nature of work	94
Married or single	92
Reason for leaving	92
References	92
Scholastic education, general	89
Drinking	87
Health, general	84
Present health	84
Qualification for clearly defined position	84
Mental attitude towards advancement	82
Pay during previous employment	79
Past health	76
Definite desires	71

Natural aptitudes, indicated by studies	66
Scholastic standing	60
Habits, general	60
Definite plans for advancement	60
Weight	58
Ideas as to relative importance of money	58
Height	55
Home environment	55
Parental supervision	55
Ultimate aims	53
Physical examination	45
Smoking	45
How previous employment was obtained	39
Line of descent	37
Hours of work, previously	37
Financial obligations, general	37
Reasons for debt, if any	37
Church	32
Societies	32
Plans for meeting financial obligations	29
Social standing, general	29
Clubs	24
Texture	21
Progress made in society	21
Athletic diversions	21
Complexion	18
Color of eyes	8

5. *Tests.*—As an aid to proper selection, numerous tests have been developed. These include tests as to ability, attitude, character, education, training and suitableness for the actual position in question.

While the use of one or more of these tests can be helpful in the work of selection, it is well to realize that no test is infallible, and that no test should be

relied upon to the exclusion of judgment and common sense.

6. *Physical tests.*—There is much difference of opinion as to the necessity and advisability of physical examination for employes. Under ordinary circumstances, there is much to be said in favor of the physical examination both from the standpoint of employer and employe. Such physical tests are usually associated in the mind chiefly with factory work, because of the strength and endurance that it requires and the danger it involves in many positions for those who are not physically fit. Office work is generally less exacting, but any continuous occupation makes demands upon the physical constitution which must be reckoned with.

The results obtained during the late war from the physical examination of men selected thru the draft evidenced the fact that the average employe is far from physically perfect. Employers who object to physical examinations often fail to take into consideration the number of days lost on account of illness and the attendant disorganization of work. Since investigation has shown that absence from work on account of physical disability averages two weeks each year per person, the value of determining physical fitness on entrance becomes apparent. Two weeks' absence means four per cent efficiency lost directly, perhaps two per cent more indirectly. If this lost time could be reduced by one-half, the resultant gain would be very appreciable.

The presence of incipient tuberculosis or heart disease can not be recognized by the employment manager at sight. The applicant who may be affected by some such physical defect may be assigned a place that is entirely unsuited to his condition. Some employers, who recognize an obligation to their employes over and above the payment of weekly wages, insist wisely upon periodical physical examinations. They desire loyalty and permanency in their force, and they are willing to pay the price. They hope to prolong the usefulness of employes trained in highly specialized duties. In assuming such responsibilities for the future, an employer legitimately protects himself against the possibility of taking on physical wrecks or allowing incipient disease to go unchecked. This can be fully achieved only by means of a physical examination at entrance and periodically thereafter. Physical examinations at the time of hiring will not only obtain a better classification of the working force, but will also serve as a valuable basis for keeping employes in prime physical condition.

As a rule, applicants dislike physical examination. It is often regarded as an undue intrusion upon their privacy. Frequently there is the fear that the examination may exclude them from the desired position. They fail to realize that such exclusion may be for their own ultimate good. Physical examination is not solely for the purpose of debarring the weak. It serves to indicate the kind of work which the employe may do with the least injury to his health. While the

number of actual rejections is generally small, it will be found that an appreciable percentage of all applicants are in need of medical attention and advice. Periodical examination of employes generally improves the physical condition of the force and thereby lessens the number of days lost to the employer on account of illness of employes. For the employes, it substantially reduces the cost of the doctor's bill, detects dangerous tendencies and minimizes the risk of contagion.

7. *Scope of physical examination.*—How far the examination should go depends upon the nature of the work and the advice of the examining physician. The doctor should inform himself as to the existing working conditions. He may do this either by a personal inspection, or by means of work specifications which sufficiently indicate the occupational dangers. Generally speaking, the scope of examination should be based on experience with regard to the defects found in that class of work in which the employe is being placed and which should be guarded against. Medically they may apply to heart and lungs, surgically to enlarged glands and varicose veins, and generally to deafness, defective vision and bad teeth.

The Guaranty Trust Company of New York, for example, requires all applicants to submit to a complete medical examination by its Medical Department in order to determine whether or not the applicant is physically fit for the work, and whether or not he might be a menace to the health of other employes.

This Company also requires all its employes to submit to a similar examination once a year. The Medical Department has certain standards whereby applicants and employes are graded, "A", "B", "C", etc. No applicant is accepted for employment whose grade is below "C."

8. *Oral tests.*—Any questions based on job specifications will tend to indicate to employer and applicant alike whether a man's qualifications fit the requirements for a position. A further refinement and check on this method is the oral trade test. These may take the form either of a number of questions or the performance of some definite mechanical operation. The principles underlying such tests were always evident, altho their actual use was fraught with difficulties, due to the fact that in many of the tests the questions asked were long. This permitted equally long and ambiguous answers on the part of the applicant and rendered grading by the average interviewer difficult.

During the Great War the army studied and developed such methods to an unusual degree, and the results obtained are readily applicable to industrial personnel work. These tests were so constructed that they can be given by any intelligent man regardless of his skill. They require no elaborate equipment, can be given in a short time, and permit of definite classification of the applicants into the four classes of expert, journeyman, apprentice or novice.

To enable an interviewer not particularly skilled in

the subject in which he is examining to classify the applicants, the questions asked are of a nature that bring definite one-word replies. Since under such a system the answers must be correct or incorrect, no difficulties in rating are encountered. A certain proportion of correct answers entitle the applicant to be ranked as expert, a smaller proportion indicates the ability of a journeyman, a still smaller one that of an apprentice while the minimum of correct answers establishes his status as a novice.

A painter might be asked what color would be obtained from mixing Van Dyke brown, brown Japan, white and rose pink. The answer would be mahogany. On the other hand if the question read what colors would you mix to make mahogany, the answer might take a number of forms according to a man's own pet theory and the average interviewer could not tell whether the man was right or not. For ordinary use, all questions can not be reduced to a basis that will bring such definite replies, but the point should always be kept in mind, and all questions should get some sort of definite reply that can be graded either right or wrong, and no question should be asked that requires a knowledge supplementary to the requirements of the job applied for. Furthermore, the questions adopted should be those that have proved their practical values in grading workers.

In actual use the different questions can be brought up as part of the interview and will serve as a check on the man's statement, thus preventing bluffing.

They are easy of application and once the questions asked have been reduced to a comparable basis, these principles can be effectively applied as a standard for selection.

9. *Picture tests.*—The principles and methods used in constructing an oral trade test apply equally to the so-called picture trade test which consists in showing the applicants a number of pictures of the tools or the actual materials commonly met with in the trade and asking specific questions about them. A carpenter can be asked to differentiate between a number of pieces of wood; the name and use of a number of tools commonly met with in his trade; and the nomenclature of certain carpentry construction work. It approximates closely the actual trade situation, and admits of quite close questioning. At the same time it has a more definite appeal to the applicant than an oral test, which he has a tendency to consider theoretical.

The collection of the material for a picture test, however, is often laborious and expensive, and the test itself takes longer to give than an oral test. Then, too, there is danger of unfamiliarity with the exact tools pictured, for several tools may be used for one purpose, and many men have not had the advantage of using all the different types. Another disadvantage is that some applicants, tho good craftsmen, have never acquired the ability to interpret a plan or drawing correctly.

10. *Mechanical tests.*—It is a well-established fact

that each man's bodily characteristics qualify him better for one type of work than for another. For instance, baseball players and other athletes have clearly distinguishable bodily characteristics that trainers look for in choosing candidates. In a more detailed manner each worker is fit for certain kinds of work in preference to others. The psychologists have measures for testing the human machine and measuring its possibilities, but as yet these have not come into common use. These psychological and physiological tests include the measurement of dexterity of both hands, range of eyesight, ability to understand verbal instructions, power of imitation, power of translation, mechanical and mathematical features, etc.

Not a few large corporations are now applying such mechanical and mental tests to applicants for positions. The actual mechanical trade tests may be a small section of the day's work for which the applicant is applying, provided he is a skilled man and the test indicative of the typical work of the trade. The same principles that apply to a mental test are equally important in a mechanical test; that is, that the results obtained thru observation of the applicant, a record of his time, and the examination of his product may be readily comparable with one set standard so that the applicants can be given a definite rating. For some types of industrial plant where the work is not of a routine nature, and requires a thoro knowledge of plant conditions, this method would be difficult, but when repetitive or routine work makes up a large part

of the day's operations, it can be easily applied. A test for an auto mechanic might include repairing a radiator, assembling a distributor or fitting jackets and packing a pump.

As far as office work goes, it is not difficult to give a stenographer some test dictation or copying work, or to an applicant for a position involving figuring, the addition of columns or some extensions to make within a certain time and with a certain degree of accuracy.

11. *Psychological tests.*—The work of the experimental psychologist is slowly developing and we now have one more theoretical basis for classifying men than we have hitherto possessed. One of the best known workers in this field was the late Professor Hugo Munsterberg whose writings on this subject have been noteworthy. For practical application of these principles over a large group, the best example is the experience which was gained in the psychological intelligence tests of the army. The average results obtained checked up remarkably with a man's ability, and the rating that had been given him previously by his immediate officers.

The aim of such tests is to measure native ability and intelligence and to ascertain just what an individual can do best. The range of such tests is extensive, and it is not always easy to apply the most appropriate type. If mathematical speed is required, a standard set of figures, the suitability of which has been previously tested, may be submitted to the appli-

cant. His time in doing the required work as compared to the average is a fair estimate of his ability. If decision of thought is an important factor in the day's work, the ability to answer questions that reveal such capability is tested. Ability to concentrate may be determined by the simple means of eliminating certain figures or letters in a given amount of print. General memory may be estimated by submitting rules or instructions for perusal, and having answers to the questions asked recorded after the lapse of a certain interval. Memory may also be tested by requiring names to be placed in a certain order after they have been disarranged or in copying figures with many digits after they have been repeated verbally.

12. *Character analysis test.*—Much has been written concerning character analysis by the observational method. Dr. Katherine Blackford has advanced the idea that physical appearance can be used as a basis of classification for industrial fitness. She has undertaken to show that a man is not short or tall, blond, or brunette by accident, and that the shape of his nose and the outline of his face are all the result of definite experiences of his ancestors. She has also applied these theories to the selection of men for industries in a practical manner. The tests have been developed thru a systematic study of texture, form, color, size, structure, consistency, proportion, expression, etc. The sum of such studies determines the place for which the applicant is best fitted. The value of this method depends on the shrewdness of the ob-

server on the one hand and the truthfulness of the applicant's appearance on the other. If either is lacking, the result is unreliable.

It is true that the face will indicate a person's character and his probable mode of life, but it must be remembered that the character of the applicant is not always fixed at the time of application and the facial indications themselves are obscure.

While there can be no question that the background for character analysis and psychological tests is sound it is questionable as to whether or not they have as yet advanced to the stage where they can be applied intelligently to industrial selection. It should be remembered that this is a difficult and illusive problem and that it is questionable whether we shall ever be able to measure men and women with the sureness that we now measure material. In the meantime, this phase of industrial progress should be carefully studied by the progressive manager.

13. *References.*—As a check on selection, references should be secured both from former employers and from persons known by the applicant other than employers. These references should be obtained either while the applicant is under consideration or at the time he or she is being hired.

References from people other than former employers, as a rule should be discounted liberally. Probably the greatest value of this type of reference is to impress upon the applicant the fact that the or-

ganization is very careful in the selection of its employes.

References from former employers, however, are frequently of real value. This is particularly true of late, for the modern tendency on the part of employers is to give references that actually tell the truth concerning former employes. In this connection many concerns refuse to give general references since they carry little if any weight.

If an employe has been dishonest, insubordinate, or wholly unsatisfactory it is unethical to give a general reference ignoring this fact. Furthermore, refusal to give references to unreliable employes goes a long way toward preventing employes from committing questionable acts.

The following information should be sought from former employers:

(a) How long was the individual in your employ?

(b) In what capacity?

(c) What is your opinion of the service he rendered?

(d) Why did he leave you?

(e) Would you recommend him for a position of trust?

(f) Would you reemploy him?

The answers to such questions as these furnish not only a check on the truthfulness of the applicant but also help to verify his ability and trustworthiness.

In requesting a reference from a person other than

a former employer ordinarily all that is desired is a statement as to character and ability.

14. *Employment requisition.*—The requisition for help originates in the department where the help is needed. In a small company it may be made informally by a department head, but as the size of the organization and the number of classified workers increase, a formal requisition is necessary for purposes of record. The form itself is usually very simple, generally indicating the department, the date of request, the type of employe required, the date when the help is to be furnished, and the name of the person making the requisition. On some forms, information concerning the type of help needed is requested. In the more elaborate forms of this type, a number indicates each job, whose full description is contained in a reference record kept in the employment department. Requisitions should be submitted early enough to allow the best available sources to be searched.

After the requisition has been filled the stub attached provides the proper notification for placing the new applicant on the pay-roll.

15. *Employe's record.*—It is customary to make the vital information presented in the application a part of the employe's record. This eliminates any duplication of information. In the more highly developed schemes a record is made on the employment form of every fact pertaining to the career of the employe; in fact, everything that indicates his caliber. Here is assembled the information upon which pro-

motion, transfer, demotion or discharge are based. Centralization of employment and record keeping makes all this possible, and no changes are decided upon except on the basis of the employment record. Provision is made for recording on this form all changes in salary, reported by the timekeeper, and all periodic reports as to progress reported by the office manager or his assistants. Finally, there is space for recording the date when employment is terminated, and the cause thereof.

The value of completing the record in respect to termination of employment, cause of leaving, and estimate of character should not be overlooked. Such data will be useful at a future time when the employe seeks reemployment or references.

The Employe's Record shown in the exhibit on pages 249 and 250 is printed on the front and back of a heavy $9\frac{1}{2}''$x$11\frac{3}{4}''$ envelop so that the application blank, references, etc., can be filed inside.

As part of the Employe's Record it is well to include a photograph of the employe. In an organization of any size, officers who do not come in daily contact with employes often know them by face but not by name. The photograph is useful, therefore, in suggesting transfers, salary increases, etc., when the identity of the employe concerned is not known to all involved.

16. *Ratings.*—Within the course of a year certain changes are bound to occur in the attitude and habits of an employe that ought to find their way into the

To..... Date.....

HELP REQUISITION

Please secure for me a (temporary / permanent) employe

in accordance with the following instructions:

Position .....

Department .....

If temporary—How long? .....

Approximate salary .....

Date wanted .....

Signed.....

Hired on .....

Salary ..... By .....

When the department head has approved the hiring of the applicant, fill in the attached stub and send it to the Accounting Department. Please return this form to the Office Manager together with the Employe's Application Blank to be filed in the Employe's Record Envelop.

Figure 8

To—Accounting Dep't. Date.....

Mr.—Miss ..... has been hired to begin work in the.....dept. on ..... at .....per week.

Signed.....

JANUARY | FEBRUARY | MARCH | APRIL | MAY | JUNE | JULY | AUGUST | SEPTEMBER | OCTOBER | NOVEMBER | DECEMBER

Male
Female

Dead File
Active File

EMPLOYE'S RECORD

Name _____ Born _____

Address _____ Phone No. _____

Living with Parents? _____ If not, why not? _____ With Whom? _____

Married? _____ How Long? _____ Number of Children _____

Education { Public School / Parochial School _____ Business School _____

High School _____ College _____

Previous experience (Enter in chronological order beginning with last position held)

Employers	Addresses	Business	Position Held	Term of Employment	Salary

REVISION OF EMPLOYMENT APPLICATION

Is / Is not Attending night school--19 _____ 19 _____

Is taking up--19 _____ 19 _____

Is / Is not following definite course of reading--19 _____ 19 _____

Following outside activities 19 _____ 19 _____

Would like following position better than one now held--19 _____ 19 _____

Remarks _____

Figure 9

EMPLOYE'S RECORD

STARTED_____

DEPARTMENT_____

POSITION_____

SALARY_____

RESIGNED / DISCHARGED } DATE_____ REASON_____

MONTHLY SERVICE RECORDS

	MERIT AND DEMERIT						ATTENDANCE						SUGGESTION					
	19			19			19			19			19			19		
Months	Merits	Demerits	Bal.	Merits	Demerits	Bal.	Days Absent	Late No. Times	Late Amount	Days Absent	Late No. Times	Late Amount	Quantity turned in	Number Awarded Prizes	Am't of Prize Money	Quantity turned in	Number Awarded Prizes	Am't of Prize Money
JAN.																		
FEB.																		
MAR.																		
APR.																		
MAY																		
JUNE																		
JULY																		
AUG.																		
SEPT.																		
OCT.																		
NOV.																		
DEC.																		

INTERVIEWS_____

REMARKS_____

Figure 9a

employment records if these records are really to serve as a guide in increasing the compensation of employes or in promoting, transferring and discharging them. As a means of reflecting these charges the rating scale is an excellent medium.

Every rating scale should express the degree to which the man in question possesses the qualifications deemed most essential. Of course for ordinary use there is room for considerable originality in laying out the definite qualifications for rating. As long as those who do the marking have a clear understanding of what is to be covered, the ratings will be fair, provided that a definite basis of comparison has been found, and there is no possible way for ambiguity of instructions.

In rating a rank-and-file worker, for instance, the basis might be as follows:

Quality of work	30
Quantity of work	30
Discipline	10
Personality	10
Attendance	10
Tardiness	10

For involved and complex work, to be performed almost wholly away from direct supervision, and depending on a man's best judgment, the ratings would probably change to 40 for quality; 30 for quantity; 20 for personality, and 10 for attendance, tardiness and discipline combined.

McCreery's Department Store in New York has

adopted a rating card which has proved a decided success. The classifications are quality, subdivided into accuracy, 10 points; neatness, courtesy and initiative, 5 points each; quantity, referring to the number of sales made, 25 points; experience, sub-divided into knowledge, 20 points; adaptability, 5 points; and co-operation, sub-divided into willingness, 10 points; and reliability, 15 points. Each employe is rated by his department head, assistant department head, section manager and floor superintendent. Wide differences in rating must be reconciled by a conference of the raters and the educational director. Slight variations are averaged.

In using such a scale, the markings should be done by each man's immediate superior who is in close touch with the qualifications to be rated. To insure fairness these ratings should be checked by some one who is thoroly familiar with the individual's work.

The direct benefit of using a rating plan lies in the basis which it gives for comparison in determining salary increases and promotions. It is a real aid, also, in discovering the strong and weak points in each employe. The indirect advantages are the psychological effects on the person rated as well as on the person who does the rating. It makes the employe realize that it is to his advantage to develop his good points and overcome his weak ones. The fact that the persons who do the rating know that their judgment is going to be checked keys up their observation and stimulates their ability to size up men.

17. *Transfers and discharges.*—In factories and offices involving a variety of work and consisting of many departments, it frequently happens that a worker who is neither fitted nor satisfactory for work in one department has natural qualifications or developed ability which would cause him to do very well when transferred to some place else. Therefore, when a personnel director is installed it is a good plan to allow department heads to discharge a man only from their own departments, subject always to review, so that the employment manager can place him elsewhere if he so desires, or make adjustment, and thus save a great part of the cost of hiring a new man. If there is no employment manager then the superintendent or office manager should assume responsibility for seeing that no one is discharged who can be used somewhere else in the organization.

REVIEW

Of what advantage to the employer is the physical examination of employes? To the applicants themselves? To other employes?

What questions would you include in preparing an application blank?

What are some of the tests that can be used in selecting employes?

Why should periodical tests be made of the employes' progress and ability?

What should be contained in the Employe's Record? How may such a record be kept up to date?

CHAPTER XVI

TRAINING

1. *Value of training.*—In recent years employers have come to realize more and more that every worthwhile employe has a potential value entirely aside from his immediate, observable value. The training of employes enables the employer to profit by this potential value.

A proper system of training will not only secure a more intelligent performance of duty but it will also inspire ambition, strengthen character and impart good business habits. Furthermore, by developing employes for more important work, training provides experienced men and women capable of assuming higher positions and larger responsibilities as the business expands.

The American Management Association has ascertained by inquiry that no organization once having installed a definite training plan has given it up. That fact alone presents a clear indication of its value.

2. *Scope of training.*—There are three main aspects to the training of employes.

In the first instance such training involves preparing the new employe to work intelligently in his new employment. No matter how small the part which

he is expected to perform, care should be taken to see that he thoroly understands his work. As far as possible all difficulties should be removed from his path. Every precaution should be taken to make him feel at home, and to familiarize him with his new surroundings.

In a second aspect, training involves the development of efficiency on the part of employes in their daily tasks. Mr. H. L. Gantt has made a real contribution to this subject in his writings on task and bonus work. He found that the output of workers who were, in the beginning, only mediocre performers, could be greatly increased by careful and systematic instruction in the details of the operations to be performed. If such instruction leads to higher output and consequent higher pay, one of the first causes of labor turnover is removed. Obviously this is a better way of securing a permanent force of men than the old method of " hiring and firing," and retaining only those who happen to qualify.

A third aspect of training involves the preparation of employes for taking over larger responsibilities. If employes are not trained for advancement within the concern, and the higher positions are filled from outside the organization, the *esprit de corps* of the office will be considerably weakened.

3. *Training plan.*—Certain precautions are necessary in the adoption of any plan of training. It may be granted that some sort of training is necessary in every plant or office yet there is always one kind that

is more applicable than another to each individual case. A training school with a regular instructor is hardly practicable in an organization employing less than 300 employes. During the war France set this number as the minimum size of industrial plants which were required to maintain training departments. No absolute rule can be fixed since consideration must be given to the numerical strength of different classes of employes, the type and variety of occupations, the age of employes, their sex and many other factors.

The fact that it is not advisable to instal an elaborate training system should not militate against the development of some kind of training work. In small organizations all the training activities may be carried on by the employer himself. The general principles of training will be the same as tho the organization were large enough to have a completely equipped training school.

4. *Centralization of training.*—It is advisable to have the responsibility for all training centralized. In this way the various educational activities are part of a definite plan. In many organizations the educational work is in the hands of a committee composed of officials of the organization.

This plan makes the handling of the work more economical and less formal. Furthermore, it tends to overcome the danger of training work becoming too theoretical.

The National City Bank of New York has devel-

oped what is probably the most extensive educational system of any financial institution. Its training and educational work is directly in charge of an educational director. Responsible to him is the staff in charge of the department of education and training thru which all of the work is carried on.

The training activities are conducted entirely for the juniors of the organization—the pages and messengers. For these, a special training is provided for several days as soon as they enter the organization and classes in a special boys' institute are arranged each morning during the school year. For adults, educational work is carried on largely in cooperation with outside educational agencies such as the universities, and other institutions giving training along business and banking lines. Instead of conducting its own courses, the bank has found that it is more satisfactory to approve the desired courses in outside institutions and pay part of the expense of the individual on completion of the courses.

Several correspondence courses covering subjects of immediate interest to the bank are also conducted.

One point to be observed from this illustration is that the adoption of educational plans need not involve an elaborate staff and a heavy increase in overhead expense. More important perhaps is the principle involved, that it is "penny wise and pound foolish" to devote all of the organization's time to production and none to definite methods of improving the ability of the producers.

It will always be found more profitable whenever possible to conduct the various training activities on company time. To do so makes it possible to insist upon attendance and a certain standard of results on the part of those in the training classes. In some organizations a division is made so that training of new employes and training for perfection in the daily work are conducted on company time, but training for promotion is conducted wholly or in part on the employe's time.

5. *Training in fundamentals of the business.*—The first step in the training of a new employe is to impart a knowledge of the fundamentals of his own company. The starting point may well be a history of the enterprise, together with an outline of what the organization as a whole is trying to accomplish. Particular stress should be laid upon the ideals of the organization with regard to service to the public and the treatment of its employes. This stage of the training may be made more interesting by showing exhibits of the various products with a brief description of how they are made. Pictures of the executives in charge of the enterprise, together with a few words about their activities, can also be used effectively in awakening the interest of the newcomer. The first part of the training may well be concluded by a trip thru the company's office or factory conducted with the idea of awakening the enthusiasm of the new employe and also with the idea of making him feel that he is already a part of the organization.

Those who have charge of the initial training of new employes should not overlook the fact that it is natural for a beginner in coming into an organization of any size to be ill at ease. If an effort is made to overcome this feeling at the start the training will be more successful and the employe will enter into his work with more enthusiasm.

6. *Training in fundamentals of position.*—After the foundation is laid as described in the previous section, the employe should next be made to understand the work of the department into which he is going, together with the relation of that department to the rest of the business. Only in this way can the new employe gain any conception of the importance of his work. If the employe is not brought to see that his work really is of vital importance, what inducement is there for him to give his best effort after he becomes accustomed to the work and its monotony begins to pall? This point, frequently overlooked, lies at the root of a great deal of the trouble in getting efficient results especially from clerical help.

In this stage of the training the organization chart which shows the new employe how he is to fit into the work of the whole organization is helpful. If the organization is a large one, special emphasis should be laid upon the part that the individual plays in the success of the business as a whole. This can be brought home in many ways. For instance the new employe can be shown how the mistake of an incompe-

tent employe can injure the good-will of the organization.

7. *Training in actual positions.*—Too much emphasis can not be laid upon the necessity that a new employe should be given a clear conception of just what his work involves and just how he is to do it. Otherwise, he is sure to make mistakes that may prove costly and which may lead to the conclusion that he is incompetent when, as a matter of fact, he may never have been properly instructed. Of course, the training here referred to takes for granted that the employe has a general training and experience fitting him for the work he has been hired to do.

Take the factory training school as an illustration. The worker is introduced to his job by a skilled instructor who can adapt himself to individual needs, and not by some foreman who is reluctant to take time from productive work, and who is frequently a poor teacher. Instruction is concentrated on the particular job which a man is to do and if possible is given in a room set apart from those in which the regular work is performed. In this way the men who are learning will not interfere with the regular processes, and are freed from nervousness in the presence of the regular workers.

The one best method of performing each operation is analyzed before instruction and the sequence of operations is determined on so that uniform methods will be assured when the new workers take their places. The simplest work and not necessarily the

first operation of any one job is taught first so that the worker can see that he is making real progress. Inability to perform even this most simple operation is an indication that the man is not adapted for the work he seeks. He can either be transferred to some other work for which he is adaptable, or discharged when his weakness is discovered before starting on regular production.

8. *Inspection of work of new employes.*—When the employe has completed the preliminary training and has proved himself possessed of a sufficient knowledge to warrant his starting actual work he should be allowed to do so. The training period is not completed, however. In actual practice it is very likely that an employe will be weak in the knowledge of certain points essential to his work. It is therefore a good idea to have a definite follow-up plan for new employes. This may provide for an inspection of part of the work turned out each day over a period of ten days or two weeks, together with an interview with the department head at the end of that period in order to determine the following points in regard to the new employe:

(a) Does the new employe understand the work in every particular?

(b) Is he interested in it?

(c) Is the work being turned out in a satisfactory manner?

(d) Are there any points in which he should be trained in more detail?

If the new employe proves satisfactory at this time no further special training is necessary. If on the other hand, he needs further training, it should be given. Ten days later the department head should again be questioned in order to be sure that this second training has accomplished the desired results.

9. *Training for better results.*—The second field of training concerns itself with the improvement of employes in the actual work they are doing. The value of this type of training lies in the fact that the average employe, unless he is constantly stimulated, tends to fall into a rut.

The following classes conducted by a large importing and exporting house will serve to illustrate the scope and value of this type of training.

Bookkeeping and Elements of Accounting	This is a course offered to all members of the staff that gives in addition to a thoro drill in the fundamentals, exercises and practise work along the methods used by the house in keeping their books.
Talks on Accounts	This course is supplementary to the course in bookkeeping and elements of accounts and covers the bookkeeping and accounting systems of the house. The talks which include discussions on General Accounts, Produce Accounts, Nitrate Accounts, Agencies Accounts and Outward Shipping Accounts are under the supervision of the chief accountant and are directed by the

	heads of the various accounting departments.
Office Practice	Thru this course all junior clerks and boys are given an opportunity to improve their knowledge of the general office routine.
Shipping Document Course	This is a course designed to give the members of the class an idea of the steps that must be taken in executing an order for export from the time it is entered by the buyer until it is fully paid for and accepted as satisfactory.
Reading Course	Employes are encouraged to use the firm's library and thoroly familiarize themselves with the countries, industries, commodities, etc., in which the house is interested thru systematic reading courses which have been carefully prepared for them.

10. *Training for advancement.*—Directly in line with the idea of training employes to do better in their present work is training them to assume larger responsibilities. Employes who have been with an organization for years, and have grown up with it, are equipped with a knowledge of the work, the policies and the ideals of the organization that an outsider can attain only with difficulty. It is exceedingly valuable to an organization if the higher positions can be filled with such men. From this point of view, therefore, it is decidedly profitable for an organization to develop its people.

R. H. Macy and Company of New York, for instance, allow all employes who have satisfactorily passed thru the preparatory as well as specialized courses to take special executive courses, thus rendering themselves eligible to positions such as departmental managers in the selling and non-selling divisions. Each employe is shown his position on a chart when he enters, together with the possible lines of advancement, and the scope of the probationary work is clearly described so that he may have a definite idea of just what he must accomplish to rise from classification to classification.

11. *Apprenticeship schools.*—The natural division of labor in modern factory systems has a tendency to confine the worker's activities to a few simple operations which he repeats continually in a routine way. A short time only is spent in showing him how to perform them. He then continues "on his own hook" and thru practice develops skill and production. In the meantime, his development as a man, except in that one operation, has been neglected, and the lack of coordination in the different parts of the work results in the arrested intelligence of the employes themselves, with a consequent lack of industry and interest, as well as ability to fill any sort of executive position.

Employers are generally coming to realize that this is not a satisfactory condition and are looking toward apprenticeship as a means of securing their future skilled workers. The old plan of a worker learning

his trade under the guidance of a master is not possible, for plants have grown so large and labor needs are so great that better results are obtained thru direct supervision by a competent instructor. While this plan of apprenticeship has lost much of the old personal character, it is more systematic and scientific, and the apprentice is not tied by a definite agreement to a modified slavery for a long period of years. The present indenture contracts for service are not exceedingly strict but have an important effect in impressing the apprentice with the seriousness of the undertaking, and of his own responsibility in the contract. Thru them it is possible to cut down the losses occasioned by half-trained apprentices abandoning their course without any benefit either to themselves or their eventual employer.

In view of the ultimate opportunities offered, no boy is likely to break his contract. The old-time disadvantage of small wages, long hours, monotonous and elementary work and unskilled teachers, with the attendant loss of opportunities thru being bound by a contract are now mainly overcome. The wages paid are large enough to satisfy essential needs, and the type of young man ordinarily wanted as an apprentice will see the advantage of taking a smaller wage with a prospect for ultimate advancement.

Usually there is no loss of opportunity thru the contract, for the training which the boys receive is exactly in line with the requirements of the trade and such apprentices, because of their knowledge of plant

conditions as a whole and not merely the specialized work of any one department, are frequently promoted to be foremen or sub-executives.

12. *Training junior executives.*—Just as the average employe of any organization appreciates the fact that training will fit him for advancement, so the junior executive himself should be made to realize the advantages of training for advancement. Not only as a preventive measure for cutting down turnover but as a method of increasing production and strengthening the business, junior executives should be given every opportunity to broaden and perfect their ability.

In some cases, this training is conducted informally thru conferences with the management, semi-social gatherings during which a certain amount of time is spent in discussing problems of business. Other companies such as the Hyatt Roller Bearing Company, a division of the General Motors Corporation, and Swift and Company have developed more extensive training plans devised particularly for their own needs.

Cooperation with neighboring collegiate institutions or the use of extension courses are possible means for further developing the latent ability of executives. The more a man knows about economics in particular and all business problems in general, the better able he is to coordinate and direct the work of his own department so that it will tie up better to the other departments of his business and industry in gen-

eral. The Modern Business Course and Service was designed for this purpose and many companies are using it as a source of supplementary training for men whom they intend to develop for better positions.

REVIEW

Why is a course of training as profitable to the employer as it is to the employe?

State the three main purposes for which training may be conducted.

What is the best method of instruction for training employes when conditions do not permit the services of regularly trained instructors.

Ought training classes to be held during office hours, or on the employes' own time?

Outline a course suitable for the training of some particular employe which will help him in his present work; which will enable him to take a position of higher responsibility.

CHAPTER XVII

STIMULATION OF EMPLOYES

1. *Meaning and value of stimulation.*—Stimulation as here used designates an effort to create in the mind of an employe the desire to do his best. This result can not be accomplished thru fair pay alone nor can it be reached thru the use of hit-or-miss plans to force greater results out of workers. Getting employes to do their best can only be effected thru the adoption of a definite, clear-cut policy which recognizes the fact that the welfare and happiness of the employes are inseparable from the success of the organization. With this policy as the basis of all action, there must result the building up of a spirit of mutual interest which stimulates every worth-while employe to devote his best efforts to the organization.

It is obvious that when employes have been properly selected and trained and that when the large majority of them are doing their utmost the organization possesses an invaluable asset. Stimulation tends to impress upon every employe that he or she is really an important factor in the organization. It visualizes the responsibilities entrusted to each one of them and thus acts to overcome a tendency of rank-and-file

workers to carelessness, indifference and thoughtlessness.

2. *Principles of stimulation.*—All successful methods of stimulation must operate with the employes' point of view constantly in mind. In other words it is not enough that the employer be convinced of the gospel of the square deal. He must also convince the employe of his sincerity. Employes are prone to judge with considerable shrewdness of the motives underlying any move, and no insincere plan can have any lasting effect.

It is also important that the methods of stimulation be entirely practical, that is, within the intelligence of those to whom they are directed. Furthermore, they must be explained and advocated on the basis of their advantage to all concerned.

The methods described below will serve to illustrate clearly the scope and value of stimulation. It should operate to improve the attitude, the conduct, and the work of employes. It is important to realize that no one method will accomplish all these results. In fact it is an important principle of successful stimulation that one must adopt a variety of methods in order to get the results desired.

3. *Personal interest.*—No organization can afford to have its workers consider themselves mere cogs in the wheel. To obtain the wholehearted effort and interest of the worker there must be that recognition of his presence which betokens an atmosphere of friendly cooperation.

The manager will do well to provide methods for coming in personal contact from time to time with every individual under his jurisdiction. This contact should vary so that the employe realizes that the organization is keenly interested in his general welfare as well as in the amount of work turned out. There are always incidents such as sickness, some difficulty in the work, or some improvement over previous accomplishments that will give the manager a point of personal contact with his people and that will serve to convince them that their efforts are appreciated. Congratulations on the anniversary of an employe's coming with the organization, and personal birthday greetings are other methods of convincing the workers that they are not cogs in the wheel.

In large organizations this personal contact will be made effective if conducted among the employes in a casual, informal way, just as it would naturally be done in a small organization. But it should be so controlled that no employe is neglected.

4. *Example.*—Employes are easily stimulated to better work by example. This is frequently overlooked, yet it is a fundamental principle. Observe the employes under a department head who is thoughtless and indifferent in the conduct of his work. It will be seen that all employes who have been under his jurisdiction for any length of time will exhibit, in a more or less pronounced degree, a tendency to be thoughtless and indifferent in carrying out their duties.

It is essential, therefore, for the manager to see to it that in every respect he sets an example worthy of being followed. It is a great mistake for a man to feel that he can successfully stimulate his people if he asks them to do things that he himself is not willing to do.

5. *House organs.*—It is always difficult to get the spirit and policies of an organization down thru the regular channels from the executives to the individual workers. A properly managed house organ makes more direct dealing possible and is an admirable means of keeping alive the ideas and spirit of an organization as well as of making known the activities and achievements of the workers. Thru it, employes of each department may know what other employes are doing and thus obtain a knowledge of the organization as a whole.

Ordinarily, it is most successful when published by the employes under the guidance of the management, but the editor himself must be carefully selected, for he must "put over" the policies and ideas of the organizations thru tactful suggestion rather than by preaching. From the very nature of the material a good bit of the copy must be of this character, and to keep it helpful and dignified, and yet preserve a simple, conversational style that will reach the employes best, is no easy matter.

The exact topics that may properly be treated in an internal house organ appealing directly to employes vary considerably with the nature of the busi-

ness and its scope of activities. The following outline of the Firestone Tire and Rubber Company's plant paper speaks for itself, and gives an excellent idea of some points that should be considered.

1. *History*—All the interesting details of picnics, celebrations, parties, records of individuals and departments, and facts about the company's progress are brought out in the magazine so that each and every employe will know and understand what is happening in the company, and be more interested in everything that affects the company.

2. *Education*—Where the product comes from and where it goes, in fact, all phases of the industry are explained so that every employe will know the entire business instead of the little nut or bolt he works on. This education makes the worker take more interest in, and put more effort into his work.

3. *Executive Mouthpiece*—The magazine is the official organ for all the policies and announcements of the management.

4. *Present-day life*—All current and interesting topics, such as household economy, matters of public interest, and industrial problems, are brought forth in an appealing manner so that the employes will be well versed in the problems that are at the time foremost in the mind of the public.

5. *Family*—Household hints for the workers' wives, announcements of births, suggestions for educating children, interesting stories of mystery, romance or humor, and propaganda as to the good working conditions in the plant to keep the workers' families interested in the plan, and so have a helpful influence in keeping the worker satisfied with his job and the company.

6. *Company institutions*—The reason for and the duties of the safety and health departments, educational features, athletic activities, entertainments, and the various clubs are all printed in the magazine. The benefits derived from the

plant welfare program are brought out so the worker will more fully appreciate them.

7. *Morale*—Notices of promotions, special achievements, awards, bonuses, faithful employes, retirements, and so on, keep the workers mentioned going full speed because of pride and cultivates a spirit of friendly rivalry that keeps the others striving.

8. *Advertising*—The mere fact that outsiders insist on seeing copies of the plant paper acts as an advertisement of the product and sometimes as an employment help.

The editor should have assistants in the different departments to encourage the writing of articles and contributions. Even tho they be reedited, credit must be given to those who wrote them, for only in this way can the full cooperation and interest of employes in building the house organ be secured.

6. *Bulletin boards.*—While the house organ is the chief means of stimulating employes thru written messages, bulletin boards may also be used to advantage.

On bulletin boards may be posted notices, leaflets, pictures, inspirational mottoes and other suitable material. The bulletin board may also be used to give information about educational facilities in the neighborhood, health hints, methods of accident prevention, efficiency hints, and new rules and regulations. It should be put in charge of some person whose duty it is to collect information, keep it in order and change the notices. Some offices use a "directory" board, such as is found in the entrance halls of large buildings, upon which are posted the names of those who attain special distinction. In other offices graphic

charts are published, showing the trend of output for the individual workers.

7. *Comment bulletins.*—It would surprise the average employer to realize how little his employes know what customers think of the organization. Every organization that is rendering satisfactory service receives letters of commendation from time to time and in other ways is brought to realize that its work is appreciated. The officers of the company are eager for such comments and are aroused thru them to greater enthusiasm for their work.

In order that the rank and file may also get this same realization and thru this realization be inspired to do better work, it will prove worth while to send out little bulletins from time to time quoting these comments. One organization that is using this plan distributes comments of this kind once a week, and in order to keep its purpose constantly active in the minds of the employes, prints at the bottom of each bulletin "No.————of a series of bulletins distributed in order that you may know what our customers think of the service you are helping to render."

8. *Environment.*—Another means of stimulating employes to better work is by improving the environment in which they work. When little or no attention is given to the appearance of the working quarters, there is no natural encouragement for the employes themselves to be neat and careful about carrying on their work. On the other hand if everything

is kept in spic-and-span shape there is an unconscious incentive to be careful about the work done.

In a room of any size, where there are a number of machines or desks, the appearance will be considerably improved and transportation made easier by definitely aligning the equipment, even going so far as to paint the marks for aisle divisions beyond which no material can be placed. A place for everything and everything in its place should be enforced to the letter.

Even with the best arrangements for neatness, slackness does occur and thoro "house-cleanings" at regular intervals are necessary. These act not only as a periodic stimulus to be orderly but eliminate the danger of valuable papers, records, and miscellaneous equipment becoming buried.

9. *Rewards.*—An opportunity for rewarding meritorious work should never be overlooked. The size and form of the reward is less important than the fact that it should be the result of a well-contested competition or steady devotion to duty. When this is the case, the plan is successful even when it is limited to a mere announcement on the bulletin board or the presentation of an inexpensive gift. The important feature is that it is a distinction granted for merit, the details of which are known to all. It stimulates the recipient to increased effort and encourages others who may have failed, to try again.

As a general rule some definite plan based on individual production is used when measurement of such

a nature is possible. A number of well-defined and tested modifications of the piece-rate system, bonus and profit-sharing plans have been evolved for accomplishing this purpose. They cover a field too large for complete discussion in the limited space available here.

10. *Recognizing length of service.*—A concern whose personnel is constantly changing, so that every few years there is a complete turnover of the rank-and-file workers, can not hope to build up the kind of a spirit upon which real service is founded. If employes stay with an organization only a year or two they leave just at the time that they are beginning to be valuable factors in the carrying on of the company's activities.

It is clear from this that it is profitable for a concern to encourage length of service. Pleasant environment, adequate salary and the providing of opportunity, are, of course, the fundamentals that encourage an employe to remain with one concern. But these are elements which a new employe has little conception of. It is therefore advisable to have a definite plan for recognizing length of service, not only to stimulate the employes longest in service but also newcomers. A plan that recognizes length of service brings home to newcomers the fact that there are a number of satisfied, successful employes who have been with the organization for many years.

The following plan is one that is being used successfully and that does not involve heavy expense. The

idea provides for granting additional vacation time with pay on the following basis:

2 years of service—1 extra day
3 years of service—2 extra days
4 years of service—3 extra days
5 years or more—1 extra week

The extra vacation period should be added to the regular vacation period.

In order to get full benefit from the adoption of a plan of this kind it should be announced some months in advance of the beginning of the vacation period.

Every new employe should be told about it. During the summer months employes earning these extra periods should be played up in such a way that a desire to earn this extra vacation privilege will be awakened in the minds of those who are not yet entitled to it.

11. *Suggestion systems.*—An excellent way to make the worker realize his responsibility, and at the same time feel that his superiors are interested in his development, is to give him a chance to prove his ability by means of a suggestion system. It is always difficult for the management to get their ideas and policies down to the workers. Likewise, it is even more difficult for the worker to place his ideas where they will be considered by the management. The suggestion system is an excellent method of solving this difficulty and will cause many to give more thought to the work going on around them.

The following are a few general principles that

must be observed if a suggestion system is to be operated successfully.

First of all, it must be understood that a monetary reward is essential for worth-while suggestions. How much to give often presents a rather serious problem, because it is so difficult to gauge the value of ideas. To overcome this real obstacle it is advisable to set a minimum cash prize to be given for all suggestions—say $1. From that minimum the prizes may range up to $10 or $15 per month for the most valuable suggestions, or it may be found advisable to set no limit. Some industrial concerns give the worker submitting a successful suggestion an annual royalty on it or a substantial increase in salary.

Another important principle that must not be overlooked in operating the suggestion system is to recognize the fact that all suggestions that are made seem important and valuable to the maker of the suggestion. That principle is too often ignored by executives and the workings of the system are therefore, much hampered. It is essential that each suggestion be recognized either in the form of a prize, if adopted, or be given an explanation showing why it has been rejected. Such explanations should be explicit and detailed enough to inspire faith in the employe that the system is fairly administered.

The third important principle is that of encouragement. Proper encouragement for employes to submit suggestions can only be given provided all the

facts are known; that is, if the executive knows how many suggestions each employe submits, how many of them receive prizes and how many of them are turned down. With such knowledge in his possession the executive should talk to his employes regularly and show them he is interested in their progress. It is particularly necessary to give proper encouragement when a large percentage of suggestions submitted are rejected. Employes often become discouraged and will not compete in the suggestion system unless encouragement is given. It has been found profitable to indicate actual problems for which constructive solutions are desired.

The fourth and final principle is the one of fairness. Every precaution must be taken to impress on the employes the fairness of the system. To that end it is often found advisable to have suggestions submitted unsigned. Identification can be made when the prizes are distributed by means of duplicate copies of suggestions, by serial numbers, or by some other mark, such as detachable coupons. Suggestions should be passed on by a committee in whom the employes have confidence.

In such well-known concerns as the National Cash Register Company and the Eastman Kodak Company, elaborate plans have been made to obtain suggestions for improvements. Substantial prizes are given and periodical announcement is made of the winners. There is a difference of opinion as to the

value of monetary reward, but there is a general agreement that publicity is a convincing incentive to good suggestions.

12. *Promotions.*—Providing an opportunity for employes to earn increased responsibility is another effective method of stimulation.

Too often promotions go by favor. The result is a marked discontent among the rank and file of employes. The lack of a just system of promotion deprives many an organization of the services of men who feel that their ambitions are balked. Recent studies in labor turnover show that the lack of opportunity for advancement is a frequent cause for men leaving their jobs just at the time when their experience is becoming a real asset to the firm.

A knowledge that they are being watched with a view to promotion is a strong factor in stimulating employes to do more than their ordinary routine duties. The system of promotion should include a carefully-thought-out plan wherein the line of promotion is defined and charted and where men are shown the specific steps which their progress is likely to take if they display those qualities which their present position demands. Promotion in such cases generally depends upon application to work, avoidance of mistakes, good behavior, regular attendance and punctuality.

The National City Bank of New York has an established policy of filling, whenever possible, all important positions by promotion, and it is only on rare

occasions that this rule is broken. In the National Cloak and Suit Company, employes are promoted on the basis of examinations, and a record is kept showing the length of time spent in preparation and the mark obtained.

Promotions are important events in the lives of employes and should be given publicity in order that they may act as a stimulus to other workers.

REVIEW

What is meant by the "stimulation" of employes?

Do you believe it is advisable to secure the "approval" of employes in introducing new schemes? How could you "sell" the idea of a new system of wages to employes?

How can an executive keep posted on each employe's effort to master his position so that he may recognize and reward special ability?

Suppose an employe has the habit of appearing at the office ten to fifteen minutes late. How would you handle this infraction of rules?

Enumerate some of the advantages of a "house organ."

Should money prizes be awarded as a reward for merit?

CHAPTER XVIII

EMPLOYES' SERVICE

1. *Purpose.*—With the growth of factories and the multiplication of employes in the office the relation of employer and employe has lost some of the more personal aspects which it had in days of simpler business conditions. At one time particularly in the factories the relation became one purely of contract without any humanizing side lights. Against this there has been a reaction, and under the name of "welfare work" and "betterment work" much has been done, and some of it unwisely in the effort to improve the condition of the worker and contribute to his welfare. Well intentioned as these efforts have been, they have often been marked by a fussy paternalism which has awakened the disgust of the workers. Because of these tendencies too often revealed in a movement which on the whole has much to commend it, the term "welfare work" has to some extent fallen into disrepute.

Modern management with its clearer vision and more scientific method bars out all false sentimentality and has substituted the term "employes' service" to designate efforts made by the employer to promote the well being of those associated with him in the

work of the enterprise. Their mission is to inject into the relations of employer and employe mutual respect and kindly feeling based on a reasonable and not officious regard for the personal interests of the worker. With these various forms which this service assumes we must now concern ourselves.

2. *Classes of service work.*—Employes' service activities may be divided into four main groups. The first group provides the fundamental physical conditions for the comfort and safety of employes, such as hygienic accommodation, fire prevention, accident prevention and health conservation. Many of these matters, such as lighting, ventilation, temperature and toilet facilities have already been treated in Chapter II, "Layout of the Office."

The second group of welfare institutions is designed to promote the health and efficiency of the employes during non-working periods. This group includes fatigue and rest periods, rest rooms, lunch rooms, outings, and vacations.

The third group of welfare institutions is designed to satisfy the mental and social aspirations of the office employes. The group includes clubs and other social or recreational organizations, as well as educational groups and libraries.

The fourth group of welfare institutions is designed to affect the financial welfare of the worker, and includes such subjects as thrift and insurance.

A brief discussion of some of the more important features of each group follows.

3. *Fire prevention.*—Consideration of fire prevention would be rendered necessary by the accumulation of valuable business documents and equipment, if it were not rendered still more imperative by the bringing together of numbers of employes, sometimes in quarters not especially constructed with an eye to safety. The adequate provision for fire prevention, and proper rules to be followed when fire breaks out, therefore, are very necessary precautions.

All should be familiar with the fire signal and the location of fire alarm stations. The location of fire extinguishers should also be known, and the method of attaching the hose should be practised until there is no possibility of delay in handling it. Rules for fire protection and for emptying the floors of the building should be published. There should be insistence that they be understood and scrupulously obeyed.

A fire marshal and assistants should be appointed and certain individuals be made responsible for the safety of valuable papers. Fire drills should be held periodically without warning, and all should practice getting out of the building under the leadership of the acting assistant fire marshals. When forces are properly drilled the spread of fire can be prevented, and still more important—panics can be avoided.

4. *Accident prevention.*—While fire prevention is a matter that concerns office managers and factory managers alike, the prevention of accidents does not assume the same importance in offices as it does in in-

dustrial plants. Here it has been made the subject of extensive legislation and is a matter of the highest concern to industrial managers. A brief review of the status of this matter will supplement our general view of employes' service.

The old philosophy assumed that the worker was sufficiently skilled or careful to look out for himself and if he was injured because of negligence on his part or on the part of a fellow worker, the employer was not to blame. Today, it is commonly held that it is the employer's duty to take every precaution to prevent accidents of every kind, and that if an accident does occur the owner must assume the financial responsibility. This, in effect, compels each industry to pay for its own losses due to accident instead of turning the incapacitated workers adrift to become a charge upon the general public.

A powerful stimulus has been given to accident prevention by workmen's compensation legislation. These laws place the burden of accidents squarely upon the employer. The burden is carried in the form of insurance, and since rates diminish when safeguards are used, a strong pecuniary motive to reduce accidents to the minimum has been introduced.

Accident prevention falls naturally into three activities, namely, designing and installing protective devices; educational propaganda which will make workers more careful of themselves and others; and lastly the collection of data which will show progress and indicate what hazards are most dangerous. In

respect to the first item much general good can be done thru the careful designing of buildings, stairs, elevators, etc. Accidents are frequent when machinery is installed without sufficient space either between machines or between machines and walls. Floor space should not be economized at the expense of safety to workers. There are now in the market all manner of protective devices for machinery and much thought is given to this phase of the matter. Guards should be substantial enough to protect the workers, for poorly constructed guards are absolutely useless. Some of the most common forms of mechanical guards are of metal and are used for inclosing belts, pulleys, and other moving parts. Open wire guards make the moving parts visible and hinged lids may be used to obtain access to moving parts.

Mr. Arthur H. Young, Director of the American Museum of Safety, estimated, however, that not over 25 per cent. of the accidents that occur are preventable by mechanical safeguards, and reasons correctly therefrom that the greatest hope lies in educational propaganda which will awaken personal interest in safety. A most interesting campaign has, therefore, been inaugurated, employing shop bulletins, cartoons, diagrams and pictures portraying in a startling and personal manner the need of caution in this mechanical age. The use of such publicity material together with adequate provision for inspecting present accident prevention methods and devising new ones will do much to reduce accidents to a minimum.

5. *Health conservation.*—The progressive employer of today knows that it pays to look after the health of his employes. Sick men are not efficient workers. Dr. Otto P. Gier, Medical Director of the Cincinnati Milling Machine Company, says "The loss in wages to the workers on account of preventable but unprevented diseases runs annually into the billion dollar mark. The accompanying loss to the employers must surely be twice that amount when we remember what a part bad health plays in efficiency." Many organizations therefore now have a resident physician and a well-equipped dispensary.

Such an equipment will most commonly first justify itself and make a place for itself as a measure for first aid and accident relief. But, if this activity is in charge of the proper kind of physician who can win the confidence of the employes, it will shortly become a center from which will radiate advice and counsel concerning all manner of personal ailments, and the resident doctor will become a confidant and personal adviser to the entire force. The value of such a department in hiring men has been discussed, but its greatest good will be with those already in employ and in following up those who have been examined at engagement. Such a department is of great value also in looking after the general sanitation of the working quarters. The objection may be raised that a small company can not afford such a department, and this is true. These concerns may ac-

complish much by cooperative methods or by having a doctor in attendance an hour or so a day.

6. *Rest period.*—The ever-increasing intensity of work has made a study of the phenomenon of fatigue an imperative necessity. It is now well recognized that rest periods, instead of diminishing output, in reality contribute to its increase. The subject has demanded increasing attention since Frederick W. Taylor, the able exponent of scientific management, demonstrated that men resting at certain determined intervals were able to carry four times as much weight in the course of a day as those who worked without such rest periods.

Rest periods are particularly valuable in work which is constantly repeated. For instance, the mere physical task of holding one's hands in the position necessary for typewriting becomes an intolerable burden after a time. Fatigue is nature's warning signal that the limit of physical endurance is being approached. Every additional unit of work requires a super-expenditure of nervous energy. It will be found that workers benefit physically and actually increase their output if they are allowed to relax for a few minutes during the morning and afternoon.

In determining the proper length and frequency of rest periods, each job must be analyzed and considered by itself and the fatigue occasioned by it minutely examined. The more repetition the operation involves and the shorter the time that each operation

consumes, the more frequent and briefer the rest period itself should be. Periods should increase in length and frequency toward the end of the day when accumulative fatigue starts in. Ordinarily, facilities are not present for the detailed study of requirements for the exact length and frequency of rest periods so the practical application is usually a single period of ten or fifteen minutes occurring once in the forenoon and once in the afternoon. When a single rest period is used it should occur in the middle of the afternoon.

7. *Rest room.*—The provision of rest rooms for use at lunch hour and during rest periods is another method of relieving fatigue and providing a pleasant break in the day's work. A bright, cozy room equipped with easy chairs, lounges, a piano and magazines will be keenly appreciated by the women employes. Likewise a lounging and smoking room for men, equipped with easy chairs, books and magazines affords an opportunity to rest weary muscles and fatigued brains.

8. *Lunch rooms.*—One of the most tangible evidences of employes' service is a clean, efficient lunch room. This is really an economy when lack of transportation facilities makes it difficult for the worker to go home to lunch. The presence of numerous poor eating-houses in the immediate vicinity of office or factory and the tendency of many to economize in their lunches are conducive neither to health nor efficiency.

At the present time, lunch rooms and rest rooms are more frequent in mercantile establishments than in industrial concerns, but the principles covering the installation of such facilities are even more important when the workers perform bodily labor. While pretentious lunch rooms are neither desirable nor feasible in small establishments, practically any isolated factory or office can and should make provision whereby the workers can obtain hot tea or coffee if they so desire. For ordinary use the cafeteria method is preferable. The plan is very feasible, and may be arranged to suit the requirements of almost any establishment. One company using this plan is able to serve 1500 men in nine minutes and another 1400 in six minutes.

The financial results of operating a lunch room should not be gauged by the profit-and-loss statement but by the effect on the employes themselves. The food should be served at cost or even at a slight loss, but in no case should paternalism be mixed with this service. When the organization is large enough, separate rooms may be provided for executives, plant and office workers, to avoid embarrassment or natural restraint caused by the presence of superiors, or by the dirty working clothes of industrial employes.

9. *Vacations.*—In many cases, the only provision for the welfare of employes is the annual vacation. There are few who can work efficiently without a complete periodic rest. So far as office employes are

concerned, the privilege of an annual two-weeks' vacation is more or less of a fixture depending only on preliminary service, ordinarily six months. In industrial plants, particularly where the worker is on piecework, the privilege of vacation with pay is seldom accorded. In view of the beneficial results of increased efficiency and production, there seems to be no logical reason why these people should not share the privileges of time off with pay.

The ideal arrangement is to set a vacation period covering four weeks, and to send the employes away in two groups. This can not be done advantageously, however, in organizations where the work must be completed on a certain schedule. Nevertheless, it does work out successfully in concerns whose business is of such a nature that certain activities can be dropped for a short period and be picked up again without serious readjustment.

The plan more generally followed is to set a certain period extending, for example, from July 1 to September 15, and to arrange a vacation schedule based on the requirements of each department.

Probably the fairest basis for determining vacations is the length of service. Two weeks' vacation is usually given for six months or more service. One week is allowed to employes who have been with the organization not less than three months. As already explained, some concerns allow three weeks' vacation with pay to employes who have been with the organization for a period of five years or more.

Every effort should be made to allow employes to go at the time they desire. This can be done by sending a notice asking them to specify the time they would like to have, and considering the preferences expressed as far as possible in making up the schedule.

It is, of course, a fundamental policy of management to have an understudy for every job that involves any great amount of detail. The planning of the vacation schedule is made comparatively simple when certain employes have been trained to handle the job immediately ahead of them.

In certain instances it is desirable to grant an extended vacation to those employes who really need the extra time for recuperation. Such cases could be decided on by a physician, and it should be made an invariable rule that all requests for extra vacation periods, whether with or without pay, should be reviewed. The larger the organization the better able it will be to make provision for additional time off to deserving employes, for the extra work can be spread among a greater number without overloading any particular position.

10. *Standard holidays.*—In addition to a properly arranged vacation schedule, there should be a definitely understood list of holidays, upon which employes may expect to be free from work. One of the chief pleasures of a holiday is the joy of anticipation.

In some concerns there is a tendency to rearrange holidays to suit the demands of business. For

instance, instead of having two holidays in February, which is a short and often busy month, one is deferred until a convenient date in April.

11. *Employes' clubs.*—An employes' club of one sort or another is an excellent medium for promoting a better understanding and more cordial relationship between employer and employe, and inculcating the proper principles of personal development and general welfare, be it mental, moral, physical or financial. The scope of club activities may extend from purely social functions to include the mental, physical and financial development of club members. Employes' clubs may also be organized to cooperate with the management regarding employes' conveniences, such as rest rooms, lunch rooms, washing and dressing facilities, etc. In some cases the club has the power of forming committees to discuss with the management such questions as hours of labor and wages. and thus closely approaches the scope of activities of the real workers' council.

The membership of such clubs generally includes all employes, both officers and workers. It is usually found good policy to have company supervision of such employes' clubs of an advisory rather than a directive or executive nature. The workers themselves should be encouraged in their efforts for social organization within the company.

As a general rule, a man appreciates something to which he has contributed far more than he does a gift, and for that reason the financing of such clubs by

employes with the backing of the management to meet ordinary deficits is desirable.

There is no doubt that in most cases employes' clubs will prove beneficial but they must be preceded by desire on the part of the workers, and not be foisted on them by the management.

12. *Libraries.*—Some of the larger firms either establish a branch of the public library system in connection with their employes' service, or conduct a library of their own, where employes may study subjects pertaining to their work. In such instances, books, periodicals and pamphlets that would otherwise be difficult to obtain are made accessible. The employes are encouraged to improve their knowledge by means of courses in reading, the librarian undertaking to keep them in touch with the periodical literature on special subjects in which they may be particularly interested. Reviews are made of new books, and busy officials are saved the trouble of examining reading matter in which they may not be interested.

13. *Insurance—Group, life and disability.*—Life insurance statistics bring out the fact that most men who reach the age of 65 years are dependent on outside sources for a livelihood. The cost of insurance is too high for the average worker to provide in full for sickness, accident, disability and old age, except by sustained and severe self-denial, and while every worker should try to meet these exigencies, the employer may well help to lighten the load.

Group insurance, a development of the local mutual

benefit association, provides an arrangement whereby the employer and worker can cooperate and provide for life, accident, and disability insurance. As the group and not individuals are the basis, no medical examination is required, and the policy protects any one who is physically fit enough to render active service. The policy contract is usually for one year and renewable with rate adjustments.

As a rule, a group life insurance is paid for by the employer because the average employe considers that death is not an early possibility. He does, however, admit the possibility of accidents, so, used in connection with group life insurance, group disability insurance is taken more to heart by individual employes. This form of insurance will take care of those losses due to sickness and accident not already provided for under the Compensation Act. Its low cost appeals to workers who know the prices of similar insurance purchased outside, and the usual liberal provisions for continued insurance, in the event of his leaving the employ of the company originally insuring the worker, gives the latter even further protection.

14. *Pension systems.*—As a means of meeting the employer's social obligation to faithful employes, in some small companies where the employer knows each of his men personally, informal payments are made to those workers who have become super-annuated in service. Payments under such methods must necessarily be considered as gratuities, as they are not pensions in the true sense.

The more pretentious plans used by larger companies naturally divide themselves into two main classes: contributory pension plans, in which the worker and the employer both contribute something to the premium; and non-contributory pension plans where the management makes all the payments. It is a question as to whether an employer whose men will not approve of the contributory plan will gain much by installing the other. The workers' cooperation is essential. Organized labor is strongly against industrial old-age pensions claiming "that it tends to make a man satisfied with his lot and hold him on the job." The number of strikes and separations from service where such systems are in operation does not seem to justify this opposition.

Lack of expert service in laying out a pension system, and in estimating the cost of financing has been the cause of some unfortunate experiences in employes' pension plans. From a recent survey of the New York Merchants Association, attention is called to special principles underlying any good pension system which may be summed up as:

(a) Competent and actuarial guidance which will make accurate forecasts of future costs.

(b) Adequate provision for accrued liabilities which are always a heavy cost.

(c) Facing the legal obligations involved.

(d) Provision for adequate financing of the plan by separation of the pension fund from other resources.

(e) Allowance for cost of intelligent administration.

(f) Cooperation of the employes in starting the pension plan.

15. *Thrift.*—Thru the issue of bonds and savings stamps during the war period the people of North America were given a thoro education in the principles of thrift. It is to be hoped that this spirit of thrift and saving was not altogether smothered by the orgy of extravagance which followed the armistice. Only by a campaign of education can thrift be effectively inculcated. The means of saving must be made convenient and the motives of the employer made to appear wholly disinterested.

In order to make the plan a success, an attempt is first made to awaken interest in it by means of pamphlets, circulars or lectures. Then a mechanism, usually of the simplest kind, is provided for collecting the contributions, which should be limited to a certain percentage of the weekly pay. The Eastman Kodak Company, for example, publishes a circular encouraging men to save. With it is a slip entitled "Authority to Make Deposits." This authorizes the cashier to subtract the agreed amount from the envelop. In other companies a bank teller calls at the office on pay days, cashes checks and receives deposits.

In beginning a savings fund of this sort, it is desirable to establish a maximum and a minimum amount of contributions. A card index, alphabet-

ically arranged, is used. Upon this card is indicated the amount contributed, the amount withdrawn and the balance. The success of any savings plan depends largely upon the manner of its presentation. It will fail if employes believe that some one is trying to interfere with their private affairs. For one thing, employes are somewhat wary in admitting that they can save anything from their salaries, fearing that such admission may be prejudicial to any argument for a salary increase.

In starting a savings fund, it is good policy for the company, after assuring itself of the soundness of the scheme, to hand over the management to the employes and grant them facilities for making it a success. This will assure most workers that the company has no ulterior motives.

In some companies employes are given the legal rate of interest on their deposits. Besides that. they are often encouraged to purchase stock at a reduced price. Thus there gradually grows up within the concern a body of stockholders whose interest in its success is, by the fact of stockholdership, firmly established. In such cases, provision is usually made for the return of the stock to the treasury, in case employes leave. The United States Steel Corporation has consistently encouraged its employes to purchase stock, sold a few dollars below the market price. In 1928 over 1,600,000 shares of stock had been subscribed for under the corporation's purchase plan.

One large office conducts a savings club, allowing employes to purchase at par, seven per cent preferred stock. Stock payments are due on the fifteenth of each month in multiples of $2.50. Interest is paid on all partial payments. As soon as a member of the club has paid in $100, a stock certificate is issued to him.

16. *Loans.*—In conjunction with the savings plan, it is well to recognize that employes may need financial assistance from time to time. Therefore, a loan fund is established for which the same machinery can be used as that which operates in the case of the savings organization. As a rule, depositors in the savings fund may borrow at least to the extent of their savings. Frequently loans are made to deserving members of the office force who have not yet become savings depositors. For loans a small rate of interest is charged, usually six per cent, with an initial charge of 10 cents for each loan. Such loans may run for three months and be renewable once for a like period. The authority to arrange for small loans is vested in the manager of the savings fund, but loans above a week's pay should be approved by a special committee.

17. *The future of employes' service.*—It is clear that this work opens up tremendous possibilities for good or evil, and the question naturally arises whither the movement is tending and what it portends. Is it a collection of unrelated items based on personal opin-

ion, experimental in their character, short-lived, and of no lasting value? Or is it a part of a greater movement toward the development of a true and satisfactory industrial democracy?

These questions would be easier to answer if one were sure of the real motives that lie back of some of these efforts. It must be conceded that much of the welfare work that has been attempted has had selfish motives back of it. Advertising, or a hope of distracting discontented employes by athletics, or the desire to pose as a benefactor and similar motives have too often been at the bottom of these ventures. Even some of those who have entered this field with the highest of motives have met with failure because their work did not rest on solid ground. What, then, is the true foundation of this important work?

Since time began there has been but one common ground on which men could meet and settle their differences equitably and that is the ground we call justice. And we may be sure that the time has gone by when men and women will accept any industrial relation on blind faith. Any educational, recreative, social or other facility provided by any employer that can not be justified before the recipients of such privileges, is preordained to fail in this enlightened age. To endure they must be in line with the growth of modern industrial democracy whose watchword is "justice and the square deal." They must rest upon brotherhood and not upon paternalism.

REVIEW

Classify the many divisions of welfare work among employes.

What factors must be considered if the physical condition of employes, while at work, is to be kept at the highest point?

Is the self-conduct of the employe, outside of working hours, a matter which should be of concern to the employer?

To what extent may employers provide opportunities for the benefit of employes, and yet avoid a paternalistic attitude?

What is meant by group insurance?

How may thrift be encouraged?

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